N8800-122F/132F, EXP320J

NEC Express5800/320Fd-LR

N8800-123F/133F, EXP320K

NEC Express5800/320Fd-MR

User's Guide (Setup)

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Keep this User's Guide handy for quick reference when necessary.

Safety Indications

To use NEC Express5800 series safely, follow the instructions in this User's Guide.

This guide explains components that pose a danger, types of dangers caused by failing to follow the instructions, and actions taken to prevent them; such components are labeled warning.

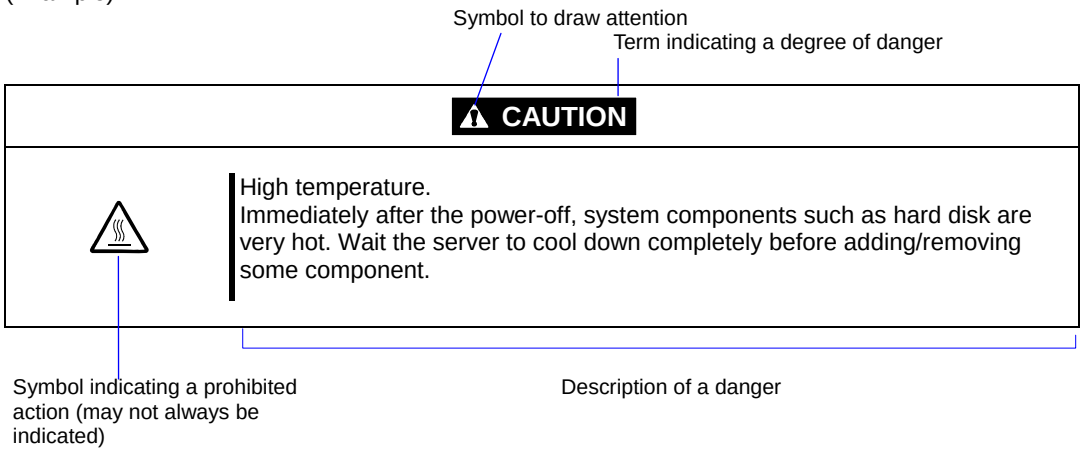
This guide and warning labels use “WARNING” and “CAUTION” to indicate a danger depending on the degree. These terms are defined as follows:

WARNING	Indicates a danger that could lead to a death or serious injury.
CAUTION	Indicates a danger that could lead to a burn, other injuries or damage to physical assets.

This guide uses the following three types of symbols to give indications and precautions against a danger. They are defined as follows:

	Indicates that there is a risk of a danger. Each image symbolizes a particular type of danger. (Attention)
	Indicates what you must not do. Each image symbolizes a particular type of prohibition. (Prohibited actions)
	Indicates what you must do. Each image symbolizes a particular type of action necessary to avoid a danger. (Mandatory actions)

(Example)

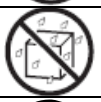

Symbol to draw attention
Term indicating a degree of danger
CAUTION
High temperature.
Immediately after the power-off, system components such as hard disk are very hot. Wait the server to cool down completely before adding/removing some component.
Symbol indicating a prohibited action (may not always be indicated)
Description of a danger

Symbols and its descriptions used in this User's Guide and warning labels are as follows:

Attention

	Indicates a risk of an electric shock.
	Indicates a risk of a personal injury due to heat.
	Indicates a risk of catching your fingers.
	Indicates a risk of a fire or smoke.
	Indicates a general precaution or warning that is not defined herein.
	Indicates a risk of losing eyesight due to laser beam.
	Indicates a risk of an explosion.
	Indicates a risk of a personal injury.

Prohibited actions

	Indicates a general prohibition that is not defined herein.
	Do no touch the indicated area. There is a risk of an electric shock or fire.
	Do not touch with wet hands. There is a risk of an electric shock.
	Keep from flame. There is a risk of a fire.
	Avoid using water or liquid nearby. If it spills on the equipment, there is a risk of an electric shock or fire.
	Do not disassemble, repair, or modify the equipment. There is a risk of an electric shock or fire.

Mandatory actions

	Unplug the server. There is a risk of an electric shock or fire.
	Indicates a general action to take that is not defined herein. Make sure to follow the instructions.

For detailed notes to set up the machine safely, refer to “NOTES FOR SAFE HANDLING” on page 1-2.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

이 기기는 업무용으로 전자파적합등록을
한 기기이오니 판매자 또는 사용자는
이 점을 주의하시기 바라며 만약 잘못
판매 또는 구입하였을 때에는 가정용으
로 교환하시기 바랍니다.

This class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE Statement
Warning: This is a Class A product. In residential environment, this product may cause radio interference, in which case the user may be required to take adequate measures (EN55022).

CLASS 1
LASER PRODUCT

This system is classified as a CLASS 1 LASER PRODUCT. This label id located on the internal DVD-ROM installed in your system.

NOTE: This product provides resistance against hardware faults with its redundant hardware modules. However, this does not mean complete fault-tolerance is assured. For example, there is a risk of system down when:
- A fatal fault occurs in software.
- Both modules within a redundant hardware pair break down.
- A fatal fault occurs in a non-redundant component, such as the clock generator circuitry or the interconnect backplane.
- The entire system is cut off from AC power.

安全注意事項

安全標示

請參考本用戶指南中的指示以安全使用NEC Express5800系列伺服器。

本用戶指南說明了設備何處有危險、危險類型、如何避免危險等。在設備可預計到的危險之處或其附近貼有警告標籤。

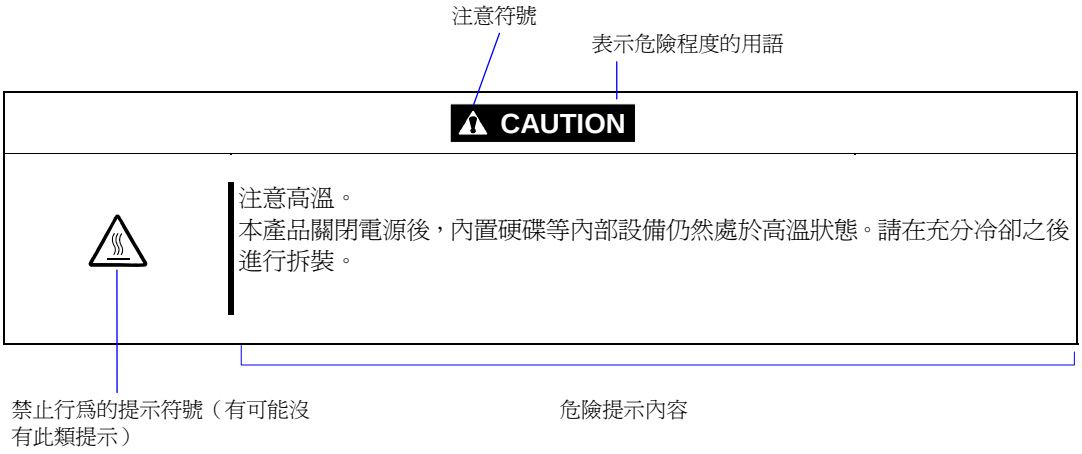
用戶指南及警告標籤中，根據危險程度不同，使用“警告”、“注意”等詞，含義如下：

⚠ WARNING	表示如不遵守該指示，可能引發人員傷亡。
⚠ CAUTION	表示如不遵守該指示，可能發生燒傷等身體損傷或造成物質損失。

對危險的提示表示有如下三種符號，具體含義如下所述：

	表示該處可能發生危險。符號爲危險內容的圖案。（注意）
	表示禁止行爲。符號中或其附近的圖案爲禁止行爲內容。（禁止行爲）
	表示強制行爲。符號中的圖案爲強制必須做的行爲內容。即爲避免危險必需的行爲。（強制行爲）

（用戶指南中範例）



本書及警告標籤中使用的符號

注意

	表示有觸電的危險。
	表示有因高溫而負傷的危險。
	表示有手指等被夾住的危險。
	表示有冒煙或者著火的危險。
	表示非特定的一般的提醒警告。
	表示有因雷射導致失明的危險。
	表示有爆炸的危險。
	表示有受傷的危險。

禁止行爲

	表示非特定的一般禁止。
	不要觸摸指定區域。有觸電或著火的危險。
	不要用濕手觸摸。有觸電的危險。
	遠離火源。有著火的危險。
	遠離液體。如果沾到液體，有觸電或著火的危險。
	請不要對本設備進行拆卸、修理、改造。有觸電和發生火災的危險。

強制行爲

	請將本設備的電源插頭從伺服器上拔下。有發生火災和觸電的危險。
	對非特定的一般使用者的行爲進行指示。請按照說明進行操作。

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，

在這種情況下，使用者會被要求採取某些適當的對策.

這是CLASS 1 LASER PRODUCT。該標籤貼於系統的內部光碟。

注意： 本產品通過多餘的硬體模組提供硬體容錯性能。但是這並不表示能夠保證完全容錯。如，在以下情況下可能發生宕機：

- 軟體發生致命故障。
- 多餘硬體雙方均發生故障，不能運行。
- 時鐘產生器線路或內部連接背板等非多餘元件發生致命故障。
- 切斷了整個系統的AC電源

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N8815-005/006, ft remote management card, adops the DVC technology of Avocent US.

The patent numbers for the DVC technology of Avocent US.

US Patent Number: 5,732,212/5,937,176/6,633,905/6,681,250/6,701,380 (others patents pending)
Taiwanese Patent Number: 173784
European Patent Number: 0 740 811

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Preface

Welcome to the NEC Express5800/ft series.

NEC Express5800/ft series is a “fault-tolerant (ft)” server focusing on “high reliability” in terms of fault-tolerance, in addition to “high performance,” “scalability,” and “general versatility” provided by NEC Express5800 series. In the event of trouble, its dual configuration will allow the system to instantaneously isolate the failed parts to assure non-stop running; operation will be moved smoothly from one module to the other, minimizing damage to it. You can use NEC Express5800/ft series in a mission-critical system where high availability is required. By the use of Windows Server 2003 operating system, it also provides outstanding openness for general-purpose applications, etc.

To make the best use of these features, read this User's Guide thoroughly to understand how to operate NEC Express5800/ft series.

開始

這次，請購買敝社的 Express5800/ft 服務器，實在謝謝。
Express5800/ft 服務器系列 Express5800 系列的「高性能」，是「擴展性」，「通用性」的特長之外又加上，考慮與耐故障性出色的「高(貴)的可靠性」，被開發了的「Fault Tolerant 服務器」。
在要求是把向從不給予由於在萬一障礙的發生中根據也雙重化，把障礙地方做為瞬間割開的事業務影響繼續做動作，一邊的組件已經一方的組件業務交待順暢地進行，業務給予的損壞做為最小限度控制住的事可能的系統的本裝置，高(貴)的可用性的基幹業務中也可以放心使用。
同時，根據 Windows 操作系統的採用，能適用通用應用軟件等，開放性也出色。
為了到最大限度拉出本裝置有的機能，很好地變成為變成使用之前正式文本為念，充分地裝置的對待也請理解。

About This User’s Guide

This User's Guide helps a user to properly setup and use the product. Consult this guide when you set up the product.

Keep this manual and the separate volume of User’s Guide handy.

This User's Guide is intended for users who have a good knowledge on the basic use of Windows operating systems and general I/O devices such as a keyboard and mouse.

How to Use This User's Guide

This guide explains the procedures you should perform before you begin system operation after you purchased the product. Read the guide in order from Chapter 1. If you perform procedures according to this guide, you will set up the product properly.

Chapter 4 describes how to install the operating system. Chapter 5 describes post-installation procedures. Chapter 6 explains how to troubleshoot if you cannot set up the product properly. Refer to “SYSTEM REPAIR” on page 6-2 for details about system configurations and repairs of this product. Refer to “TROUBLESHOOTING” on page 6-13 if you feel you failed to set up the product.

See this User’s Guide for details of this product’s operation, and functions and operations of the hardware and the system.

Additional Symbols

The following symbols are used throughout this User's Guide in addition to the caution symbols described at the beginning.

IMPORTANT:	Important points or instructions to keep in mind when using the server or software
CHECK:	Something you need to make sure when using the server or software
TIPS:	Helpful information, something useful to know

About our Web Service

Information on NEC Express5800/ft series including modification modules is also available on our web site, NEC Express5800 Web Site Asia Pacific:

http://www.nec.co.jp/express/index.html

關於正式文本

使正式文本，是為了確實安裝本裝置，能使用的輔導。進行安裝的時候請利用。使正式文本及另冊的用戶指南請經常放置在實體旁邊無論什麼時候能看。

正式文本，作為所說的關於 Windows 等的操作系統和鍵盤，鼠標的一般的輸入輸出設備等的基本的處理有了充分的知識的用戶對象被記載。

正式文本讀方法

正式文本，本裝置的購買後，關於到能為止的系統的運用次序說明著。如果做從 1 章順序讀，隨著被記載的說明的操作，確實能安裝本裝置。4 章，如果把安裝被本裝置編入的操作系統與(第一次把電源做為 ON 的時候的安裝次序)重新重新安裝操作系統的重新安裝(OS 的時候的安裝次序)分成購買的時候說明著。安裝的目的合起讀請分開。5 章，說明著對安裝完成後必要的各種工作的次序。還 6 章「故障嗎？想的時候」那麼，不能很好地安裝的情況的應對方法被記載。本裝置的系統設定和有關修復的信息「系統的修復」(6-2 頁)，「安裝失敗了嗎？如果有」隨心的事，請看「故障查找」(6-15 頁)。再者，卷末有索引。按照必要請有效的利用。

本裝置的運用和硬件及系統具體的機能· 操作的說明請參照另冊的用戶指南。

關於本文中的記號

除了正式文本卷頭表現了的安全有關的注意記號以外使用著 3 種記號。變成這些的記號和意義為理解，請確實處理裝置。

重要:	使用服務器或者軟件的時候預先記的重要的要點又指示
檢查:	需要你服務器或者使用軟件的時候，確實做(製作)的什麼
暗示:	有用的信息，暗示

關於正式文本的再購買

如果被遺失了正式文本，最近的銷售店，或購買的銷售店請諮詢。能從用戶指南，和添加的光碟收納的在線文獻的一部分，下面的主頁下載。

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Chapter 1

Before Using

This chapter includes information necessary for proper and safe operation of the server, the main unit and its accessories. Go through this chapter before you start setup of the product.

在使用前

為了把本裝置做為安全確實變成使用必要的關於信息，實體及附屬品等記載著。在安裝實體之前，必定請讀。同時，關於本文中的名稱請參照用戶指南的「與各部分的名稱功能」的項

NOTES FOR SAFE HANDLING

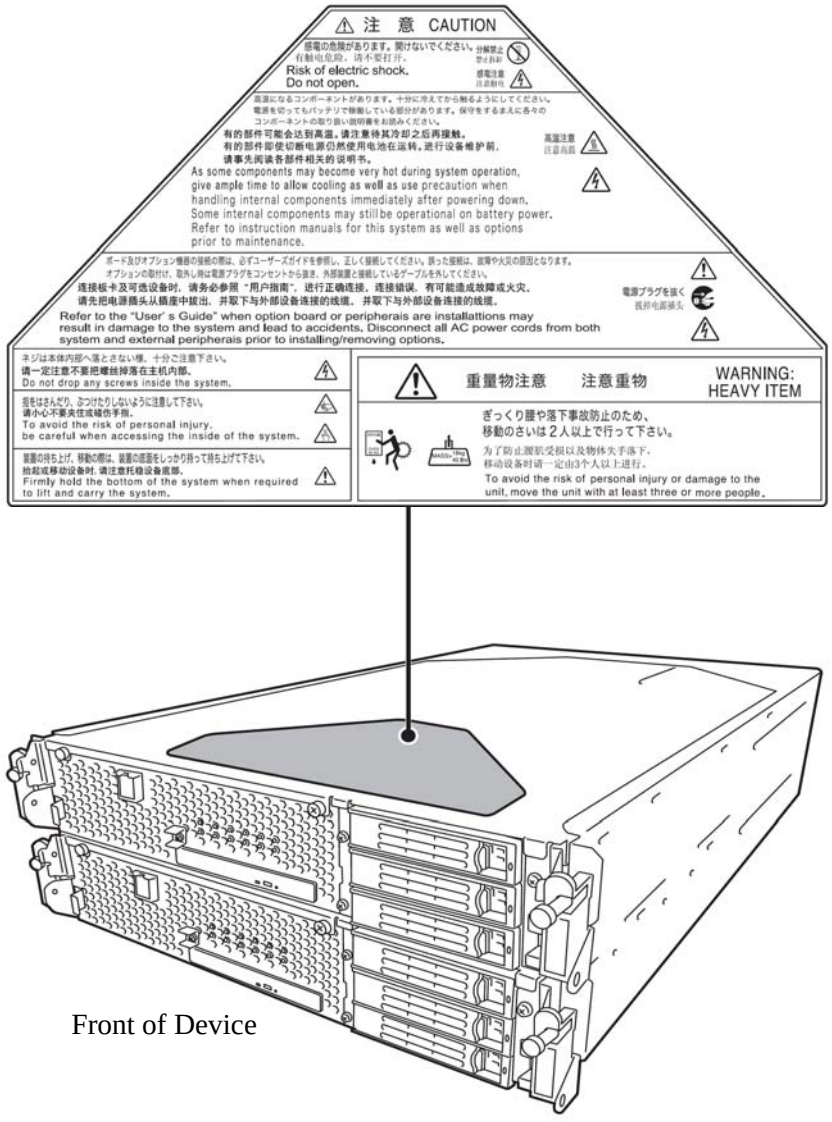
The following section describes necessary information to use the product properly and safely.

Warning Label

Warning label is placed in the certain part of the system so that the user stays alert to possible risks. Do not remove or damage the label.

If this label is missing, about to peel off, or illegible, contact your sales agent.

The figures below show the location of this label on the server.


⚠ 注 意 CAUTION
Risk of electric shock.
Do not open.
有的部件可能会达到高温。请注意待其冷却之后再接触。
有的部件即使切断电源仍然使用电池在运转。进行设备维护前，
请事先阅读各部件相关的说明书。
As some components may become very hot during system operation,
give ample time to allow cooling as well as use precaution when
handling internal components immediately after powering down.
Some internal components may still be operational on battery power.
Refer to instruction manuals for this system as well as options
prior to maintenance.
连接板卡及可选设备时，请务必参照“用户指南”，进行正确连接，连接错误，有可能造成故障或火灾，
请先把电源插头从插座中拔出，并取下与外部设备连接的线缆，并取下与外部设备连接的线缆。
Refer to the “User’s Guide” when option board or peripherals are installations may
result in damage to the system and lead to accidents. Disconnect all AC power cords from both
system and external peripherals prior to installing/removing options.
重量物注意 注意重物 WARNING: HEAVY ITEM
ぎっくり腰や落下事故防止のため、
移動のさいは２人以上で行って下さい。
To avoid the risk of personal injury or damage to the
unit, move the unit with at least three or more people.
Front of Device

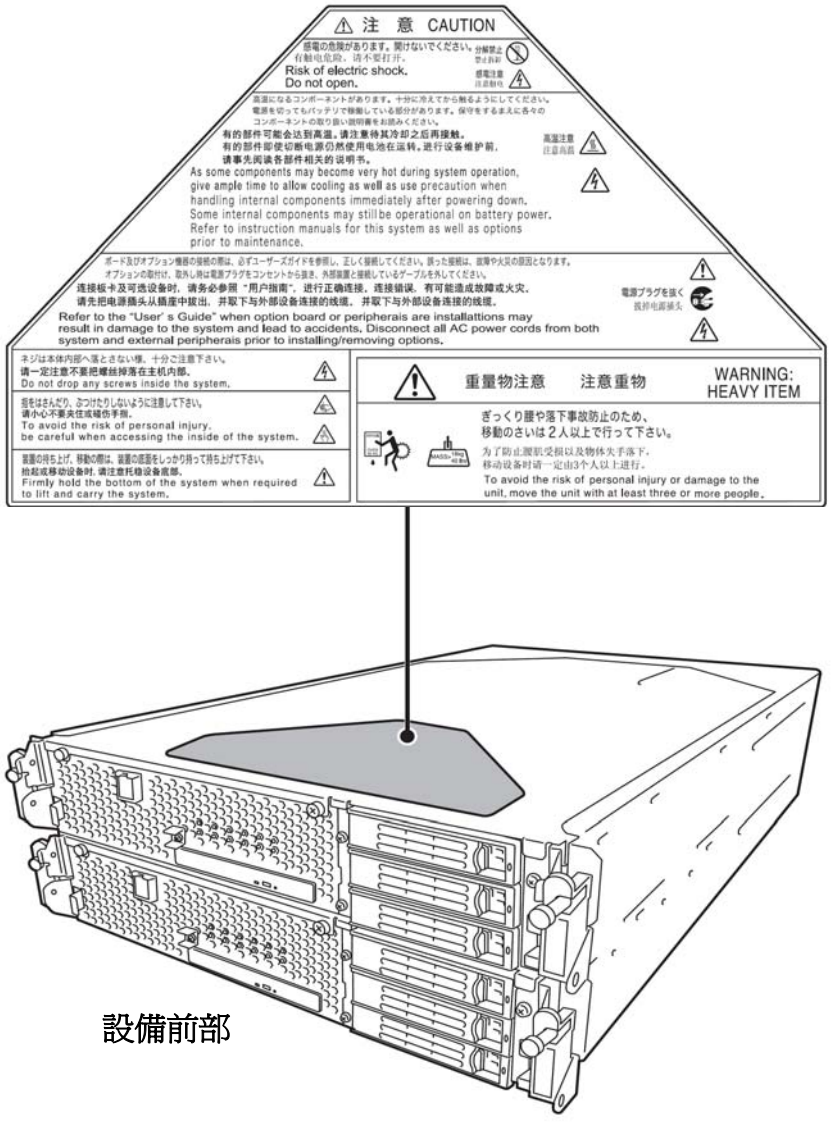
爲了把有爲了安全對待的注

意的本裝置做爲安全確實變成使用必要的信息被記載。

關於警告標籤

隱藏實體內的危險性的零部件和那個週邊警告標籤被粘貼。這個是爲了請操縱本裝置的時候，經常在顧客裡(上)認識能考慮的危險性的東西(揭下標籤，請別弄髒)。如果這個標籤沒被粘貼，剝落懸掛著，髒等做不能辨認的時候購買的銷售店請聯絡。

對以下表現被本產品粘貼的標籤的位置。



設備前部

PRECAUTIONS FOR SAFETY

This section provides precautions for using the server safely. Read this section carefully to ensure proper and safe use of the server. For symbol meanings, see “Safety Indications” described in the previous section.

General

⚠ WARNING

Do not use the server in an operation where human lives are involved or high reliability is required.

This equipment is not intended for use in controlling or use with facilities or systems where human lives are involved or high reliability is required, including medical devices or nuclear, aerospace, transportation, and traffic control facilities. NEC assumes no liability for any accidents or damage to physical assets resulting from the use of this equipment in such systems or facilities.

Do not continue to use the server if you detect smoke, odor, or noise.

If the server emits smoke, odor, or noise, immediately flip off the POWER switch, unplug the cords, and contact your sales agent. There is a risk of a fire.

Do not insert a wire or metal object.

Do not insert a wire or metal objects into a vent or disk drive slot. There is a risk of an electric shock.

⚠ CAUTION

Prevent water or foreign objects from getting into the server.

Do not let water or foreign objects (e.g., pins or paper clips) enter the server. There is a risk of a fire, electric shock, and breakdown. When such things accidentally enter the server, immediately turn off the power and unplug the cords. Contact your sales agent instead of trying to disassemble it yourself.

Use of Power Supply and Power Cord

⚠ WARNING

Do not handle power plugs with a wet hand.

Do not plug/unplug power cords with a wet hand. There is a risk of an electric shock.

Do not connect the ground wire to a gas pipe.

Never connect the ground wire to a gas pipe. There is a risk of a gas explosion.

⚠ CAUTION

Do not plug the cords in nonconforming outlets.

Use wall outlets with specified voltage and power type. There is a risk of a fire or current leakage.

Avoid installing the server where you may need extension cords. If the cords do not meet the power specifications, there is a risk of overheating that could lead to a fire.

Do not plug too many cords in a single outlet.

If the rated current is exceeded, there is a risk of overheating that could lead to a fire.

Do not plug the cords insecurely.

Insert the plug firmly into an outlet. There is a risk of heat or fire due to poor contact. If dust settles on the slots and it absorbs moisture, there is also a risk of heat or fire.

Do not use nonconforming power cords.

AC cord is to spend the thing of the next specifications:

You also have to observe the following prohibitions to prevent an electric shock or fire caused by damage to the cords.
Do not pull on the cords.
Do not pinch the cords.
Do not bend the cords.
Keep chemicals away from the cords.
Do not twist the cords.
Do not place any object on the cords.
Do not use cords as bundled.
Do not alter, modify, or repair the cords.
Do not staple the cords.
Do not use any damaged cord. (Replace it with a new one of the same specifications. For replacement procedures, contact your sales agent.)

Installation, Relocation, Storage and Connection

⚠ CAUTION

Do not install the server in an unsuitable place.

Install the server in such a place as specified in this User's Guide. Avoid the following locations. There is a risk of a fire.

- a dusty place
- a humid place located near a boiler, etc
- a place exposed to direct sunlight
- an unstable place

Do not use or store this product in a corrosive environment.

Avoid the usage or storage of this product in an environment which may be exposed to corrosive gases, such as those including but not limited to :
sulfur dioxide, hydrogen sulfide, nitrogen dioxide, chlorine, ammonia and/or ozone.
Avoid installing NEC Express5800/ft series in a dusty environment or one that may be exposed to corrosive materials such as sodium chloride and/or sulfur.
Avoid installing this product in an environment that may have excessive metal flakes or conductive particles in the air.
Such environments may cause corrosion or short circuits within this product, resulting in not only damage to this product, but may even lead to be a fire hazard.
If there are any concerns regarding the environment at the planned site of installation or storage, please contact your sales agent.

Do not use any non-designated interface cable.

Use only interface cables designated by NEC; identify which component or connector to attach beforehand. If you use a wrong cable or make a wrong connection, there is a risk of short-circuit that could lead to a fire.

You also have to observe the following prohibitions about handling and connecting interface cables:

- Do not use any damaged cable connector.
- Do not step on the cable.
- Do not place any object on the cable.
- Do not use the server with loose cable connections.
- Do not use damaged cables.

Cleaning and Handling of Internal Devices

⚠ WARNING

Do not disassemble, repair, or alter the server.

Unless described herein, never attempt to disassemble, repair, or alter the server. There is a risk of an electric shock or fire as well as malfunction.

Do not look into the DVD-ROM drive.

The DVD-ROM drive uses a laser beam. Do not look or insert a mirror inside while the system is on. A laser beam is invisible; if your eyes get exposed to it, there is a risk of losing eyesight.

Do not detach a lithium battery yourself.

This equipment has a lithium battery. Do not detach it yourself. If the battery is exposed to fire or water, it could explode.
When the lithium battery is running down and the server does not work correctly, contact your sales agent instead of disassembling, replacing or recharging it yourself.

Disconnect the power plugs before cleaning the server.

Even though built-in options for the server can be replaced while the power cords are connected to power source, be sure to follow the instructions described in this User's Guide. Do not touch any internal device of the server unless instructed by this User's Guide. There is a risk of an electric shock.
Make sure to power off the server and disconnect the power plug from a power outlet before cleaning or installing/removing internal optional devices. Touching any internal device of the server with its power cords connected to power source may cause an electric shock even if the server is off-powered.
Disconnect the power plug from the outlet occasionally and clean the plug with a dry cloth. Heat will be generated if condensation is formed on a dusty plug, which may cause a fire.

⚠ CAUTION

High temperature

Immediately after powering off the system, system components such as hard disk may be very hot. Wait for the server to cool down completely before adding/removing components.

Make sure to completely insert cables and boards.

Completely insert all power cords, interface cables and/or boards. An incompletely inserted component may cause a contact failure, resulting in fire and/or smoke.

⚠ CAUTION

Protect the unused connectors with the protective cap.

The unused power cord connectors are covered with the protective cap to prevent short circuits and electrical hazards. When removing the power cord connector from the internal devices, attach the protective cap to the connector. Failure to follow this warning may cause a fire or an electric shock.

During Operation

⚠ CAUTION

Keep animals away.

Keep animals away from the server. Animal's waste or hair may get inside the server to cause a fire or electric shock.

Do not place any object on top of the server.

The object may fall off to cause injuries, damage to hardware and/or a fire.

Do not leave the DVD tray ejected.

Dust may get in the server to cause malfunction. The ejected tray may also become a cause of injuries.

Do not touch the server when it thunders.

Unplug the server when it threatens to thunder. If it starts to thunder before you unplug the server, do not touch the server or cables. There is a risk of a fire or electric shock.

Rack-mount Model

⚠ WARNING

Do not install the server on a nonconforming rack.

Install the server on a 19-inch rack conforming to the EIA standard. Do not use the server without a rack or install it on a nonconforming rack. The server may not function properly, and there is a risk of damage to physical assets or injuries. For suitable racks, contact your sales agent.

Do not use the server in an unsuitable place.

Do not install a server rack in an unsuitable environment.
Other systems also may be affected, and the rack may fall over to cause a fire or injuries. For details about installation environment and quake-resistant engineering, see the attached manual or contact your sales agent.

⚠ CAUTION

Be careful not to hurt your fingers.

Exercise great care not to hurt your fingers on the rail when you mount/dismount the server into/from the rack.

Carry or install the server by more than 3 people.

To avoid a risk of injuries, users should not attempt to carry or install the server into a rack. Installation should be performed by trained maintenance personnel.

Do not install the server in such a manner that its weight is imposed on a single place.

To distribute the weight, use stabilizers or attach two or more racks. Unstable rack may fall down to cause injuries.

Do not assemble parts alone.

It takes at least two people to mount doors and trays to a rack. If you handle them alone, you may drop some parts to cause a breakage or injuries.

Do not pull a device out of the rack if the rack is unstable.

Before pulling out a device, make sure that the rack is fixed (by stabilizers or quake-resistant engineering).

Do not leave more than one device pulled out from the rack.

If you pull out more than one device, the rack may fall down. You can only pull out one device at a time.

⚠ CAUTION

Do not install excessive wiring.

To prevent burns, fires, and damage to the server, make sure that the rated load of the power branch circuit is not exceeded. For more information on installation and wiring of power-related facilities, contact your electrician or local power company.

Do not pull out a device during operation.

Do not pull out or remove a device while it is running. There is a risk of malfunction and a device may be detached from a rack to cause injuries.

安全注意事項

本節講述安全使用本伺服器所需的注意事項。爲了您正確安全地使用本伺服器，請仔細閱讀該節內容。
符號的相關說明請參考“安全標示（SAFETY INDICATIONS）”說明。

一般注意事項

⚠ WARNING

不要用於危及人命和需要高度可靠性的操作上。

本產品不要安裝在醫療設備、原子能設備、航空宇宙機器、運輸設備等會危及人命以及需要高度可靠性的設備和機器上，也不要使用本產品來控制這些機器。如果將本產品用於這類系統的設備及機器，造成人身事故及財產損失等後果，本公司概不負責。

發生冒煙、異味、雜音時不要使用。

發生冒煙、異味、雜音等時，請直接關閉電源POWER，並將電源插頭從插座上拔下。然後請與經銷商或維護服務公司聯繫。繼續使用會導致火災。

不要插入鐵絲和金屬片。

不要將金屬片和鐵絲等異物插入通氣孔或軟碟機、光碟機的縫隙。有觸電的危險。

⚠ CAUTION

在海外不使用。

本裝置，是日本國內專用的裝置。在海外不能使用。在海外使用這個裝置的話成爲火災和觸電的原因。

設備內不要進水和異物。

設備內不要進入水、針、夾子等異物。有可能導致火災和觸電。一旦進入異物，請立即關閉電源，將電源插頭從插座上拔下來。不要自行拆卸，請與經銷商或維護服務公司聯繫。

使用電源及電源線注意事項

⚠ WARNING

不要用濕手拿電源插頭。

不要用濕手插拔電源插頭。有觸電的危險。

不要把地線連接到煤氣管道上。

請勿將地線連接到煤氣管道上。有導致煤氣爆炸的危險。

⚠ CAUTION

不要插入未指定的插座。

電源請使用指定電壓及電源的壁式插座。使用未指定的電源會造成火災和漏電。請避免使用延長線安裝設備。如果連接與本產品電源規格不相符的電線，會因過熱而導致火災。

不要在一個插座上插接多個電源線。

插座如果超過額定電流，會因過熱而導致火災的危險。

不要只插入一半。

請將電源插頭直插到底部。如果插入一半會因接觸不良而發熱，造成火災。另外，插入部如附著灰塵、水滴等，會因發熱導致火災。

不要使用未指定的電源線。

請使用下列規格的AC電源線。
此外，操作和連接電源線時請遵循以下注意事項。

- 不要拖拽電源線。
- 不要夾電源線。
- 不要彎折電源線。
- 不要使電源線靠近化學藥品。
- 不要扭曲電源線。
- 不要在電源線上載入物品。
- 不要捆綁電源線。
- 不要對電源線進行改造、加工、修復。
- 不要用固定器等固定電源線。
- 不要使用損傷的電源線。（損傷的電源線要立即更換爲相同規格的電源線。更換事宜請與經銷商或維護服務公司聯繫）

3極點用的電源插座以外不使用。

被本裝置添加的電源編碼拿第3大頭針(earth pin)的3極點插頭被裝備。這個插頭，只3極點用的電源插座能使用。使用那個以外的電源插座的話，有觸電的可能。其他的裝置和用途不使用添加的電源編碼

添加的電源編碼作爲目的被設計連接到本裝置，使用的事，那個安全性被確認。請別絕對其他的裝置和用途使用。有成爲火災和觸電的原因的可能。

安裝，移動，保管及連接注意事項

⚠ CAUTION

不要安裝或存放在未指定的場所。

不要將本設備放置在如下場所和本書未指定的場所，有導致火災的危險。
- 灰塵較多的場所
- 熱水器旁等濕氣較高的場所
- 陽光直射的場所
- 不平穩的場所

不要在腐蝕性環境中使用或存放設備。

不要在有腐蝕性氣體（如二氧化硫、氫化硫、氮、氫、氨或臭氧等）的環境中使用或存放本產品。
不要將本產品安裝在灰塵較多或含有腐蝕性物質如氯化鈉或硫磺等的地方。
不要將本產品安裝在空氣中含有過量金屬碎末或傳導粒子的地方。
上述環境可能導致本產品腐蝕或短路，因而損壞產品，甚至引起火災。
對產品安裝或存放環境有任何疑問，請與經銷商或維修服務公司聯繫。

⚠ CAUTION

不要使用未指定的信號線。

使用NEC指定的信號線，並在確認連接設備和介面後進行連接。使用未指定信號線或連接錯誤等會造成短路、導致火災。
信號線的操作和連接，須遵守以下注意事項：

- 不要使用任何損壞的信號線接頭。
- 不要踩踏信號線。
- 不要在信號線上載入物品。
- 信號線接鬆動時不要使用。

不要使用任何損壞的信號線。

整理及操作內部設備時的注意事項

⚠ WARNING

不要自行拆卸、修理或改造本伺服器。

除本書記載的情況外，不要進行拆卸、修理、改造。否則，不但可能導致設備不能進行正常運行，還有發生觸電和火災的危險。

不要看光碟機內部。

光碟機使用了雷射，請不要在電源打開的狀態下觀看內部或插入鏡子等。雷射射射入眼睛有導致失明的危險（雷射肉眼看不見）。

不要擅自拆除鋰電池。

本產品內部安裝有鋰電池。請不要拆下電池。鋰電池靠近火或浸水均有可能發生爆炸。

由於電池使用期限而導致設備不能正常運行時，不要自行拆卸、更換、充電等，請與經銷商或維護服務公司聯繫。

清潔伺服器前請拔下電源插座。

整理或拆裝本設備內部的選購配置時，要切斷設備電源，並拔下電源插頭。即使已關閉電源，但連接著電源線，接觸到任何內部設備也有觸電的危險。

另外，請經常拔下電源插頭，用乾布擦拭灰塵和附著物。有灰塵或水滴等附著時會發熱，有導致火災的危險。

⚠ CAUTION

注意高溫

本產品關閉電源後，內置硬碟等內部設備仍然處於高溫狀態。請在充分冷卻之後進行拆裝。

確認安裝完畢。

電源線和信號線、配件板要確實安裝妥當。
安裝不牢有可能引起接觸不良，可能造成冒煙和著火。

⚠ CAUTION

請用保護蓋保護好未使用的介面。

請用保護蓋保護好未使用的電源線介面以防止短路或觸電。從內部設備上拔下電源插頭時，用保護蓋蓋好介面，否則有導致火災或觸電的危險。

操作注意事項

⚠ CAUTION

不要在打雷時觸摸機器。

打雷時請拔下電源插頭。如來不及拔下電源插頭，請不要觸摸設備及線纜等，防止發生火災或觸電。

不要讓寵物靠近。

寵物的排泄物和毛髮進入設備可能導致火災和觸電。

設備上不要放置物品。

物品倒下可能引起傷亡，破壞硬體或導致火災。

不要將光碟機托盤拉出放置。

防止托盤中進入灰塵引起運轉錯誤。同時防止因碰撞等造成托盤損傷。

機架式伺服器的注意事項

⚠ CAUTION

不要將設備安裝在未指定的機架上。

請將設備安裝在符合EIA標準的19英寸機架上。一定要將設備安裝在指定的機架上才能使用。否則設備可能無法正常使用，並有可能損壞機器零部件或導致人身傷害。關於合適的機架，請與您的經銷商聯繫。

請不要自行安裝本設備。

爲了避免人身傷害，請不要自行將本機器安裝到機架上。應該由受過專業訓練的維護人員來安裝。

〈僅供維護人員閱讀〉

安裝機器時不能將機器的所有重量由一個地方來承載。

爲了分散重量，應該加裝固定器或者同時安裝兩個或更多的機架，否則機架可能會傾倒導致人身傷害。

不要擅自組裝零部件。

將前門和托架安裝到機架上至少需要兩人共同完成，否則可能會因爲零部件跌落而導致損壞或者人身傷害。

不要從不牢固的機架中抽出設備。

在抽出設備之前請確認機架已經被穩固器或者通過抗震技術固定。

不要從機架抽出兩個或者兩個以上的設備。

同時抽出兩個或者兩個以上的設備可能導致機架傾倒。一次只能抽出一個設備。

不要裝配過多電線。

爲了避免火災和設備損壞，請務必確保不要超過線路的額定負載。有關電力設備的安裝和電線的更多資訊請聯繫電工或者當地的電力公司。

請小心不要夾住或碰傷手指。

將本機器安裝到機架上或者從機架上卸載的時候，請務必小心以免被滑軌劃傷手指。

一個人不做搬送·設置

架的搬送·設置請以3人以上去。架倒下成爲傷和周圍的破損的原因。特別有高度的架(44U架等)對不穩定的狀態有根據穩定器等沒被固定的時候。必定以3人以上一邊支撐架一邊請做搬送·設置。

UNPACKAGING

This product and various accessories are in the special shipping box. Take them out from the box and check the individual items. Store the box and unused accessories in a safe place.

Accessories

This product is shipped with various accessories. See the packing list to make sure everything is included and check the individual items. If any component is missing or damaged, contact your sales agent.

- Keep the accessories in a safe place. You will need them when you perform setup, addition of options, or replacement of failed components.
- To check NEC EXPRESSBUILDER components, see the attached list.
- Be sure to fill out and mail the software registration card that is shipped with the operating system.
- Make backup copies of included floppy disks, if any. Keep the original disks as the master disks; use these copies in operation.
- Improper use of an included floppy disk or DVD may alter your system environment. If you find something unclear, stop using them and contact your sales agent.

確認箱子的內容的

本產品和附屬品進入著專用的捆包箱子。從箱子取出各自檢點。捆包箱子和有餘了的附屬品請最後一幕保管。關於附屬品本

關於附屬品本

產品的捆包箱子的其中，對實體以外種種的附屬品進入著。確認參照添加的構成品表全部齊(整)的事，請各自檢查。萬一不足的如果有東西和損傷的東西，請與購買的銷售店聯繫。

- 附屬品因爲到做安裝的時候和選擇的增設，本裝置出現故障了的時候必要最後一幕請保管。
- 關於附屬品的「EXPRESSBUILDER」的構成品，請參照包裝中有的構成品表。
- 操作系統添加的軟件登記卡，請所定事項記入之後，必定投進郵筒。
- 如果軟盤被添加，請採用軟盤的接應。同時，作爲 master disc 最後一幕保管添加的軟盤，請使用備份盤。
- 附屬的軟盤再光碟機，有在使用方法上犯錯誤的話變更了顧客的系統環境的可能。如果關於使用有不明的點，不做困難的操作請對購買的銷售店，或保守服務公司詢問。

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Chapter 2

About Operating System

This chapter gives essential information on the Windows system supported by the server and how to install it.

INSTALLING Windows Server 2003 x64 Editions/ Windows Server 2003

For installing an operating system on NEC Express5800/ft series, refer to the below description.

IMPORTANT:
The NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to install it.

Before performing the NEC EXPRESS5800/ft series setup, contact your sales agent about the latest release of ft Server Control Software.

About OS Installation

Read the notes here carefully before installing the operating system.

Operating System Supported by the NEC Express5800/ft series

The operating system that NEC Express5800/ft series supports is as follows:

- **Microsoft® Windows Server™ 2003 R2 Enterprise x64 Edition (English)**, hereafter called "Windows Server 2003 x64 Editions."

  For more information on how to install Windows Server 2003 x64 Editions, refer to "Manual Setup."

- **Microsoft® Windows Server™ 2003 R2 32-bit Enterprise Edition (English)**, hereafter called "Windows Server 2003."

  For more information on how to install Windows Server 2003, refer to "Express Setup."

NEC Express5800/ft series does not support any operating systems other than the above (e.g., Windows Server 2003 Standard Edition, Windows 2000 or Windows NT 4.0).

About Windows Server 2003

Use the Express Setup program to install Windows Server 2003. Note the following at installation:

IMPORTANT:

- Complete all the setups such as the memory expansion and the BIOS setting before installing Windows Server 2003.
- NEC software package, which is to be purchased separately, is also provided with the documentation for installation. However, see this User's Guide for installation into this server.
- After completing the Express Setup program, make settings for failure management (e.g., memory dump (debug information) setting) according to Chapter 4.
- The Express Setup is only applicable to Windows Server 2003; “Manual Setup” is applicable to Windows Server 2003 x64 Editions. “Manual Setup” allows you to manually and individually install Windows Server 2003 x64 Editions, disk drivers and other utilities.

About Auto Installation of Utilities

The Express Setup installs the following utilities automatically.

- Drivers and services for achieving duplicated operation
- NEC ESMPRO Agent

The Express Setup program is exclusively used for the NEC Express5800/ft series. To execute the setup program, simply select the item [Express Setup] from the menu displayed when starting the system through the provided “NEC EXPRESSBUILDER.” The setup program automatically performs the complete setups from hardware internal parameter/status settings to installation of the operating system (Windows Server 2003) and various utilities.

Use the NEC Express5800/ft series setup program for the first installation and reinstallation of the operating system. This program accomplishes complicate setups.

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Chapter 3

Installing Server

This chapter describes requirements for using the product properly and safely, the setup procedures to make NEC Express5800/ft series ready for use, and how to connect peripherals.

INSTALLATION

This section describes installation of NEC Express5800/ft series.

Rack-mount Model

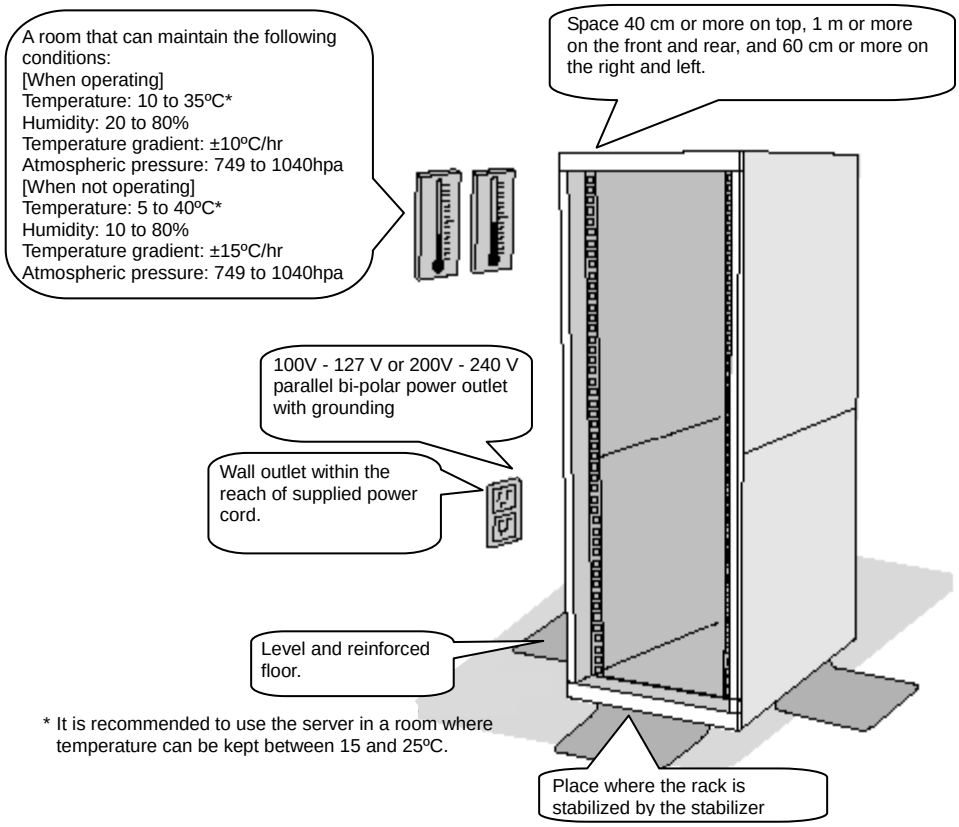
You can mount NEC Express5800/ft series on a rack that conforms to the EIA standards.

IMPORTANT:

NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to install it.

Installing a rack

To install a rack, see the instruction that comes with the rack, or contact your sales agent or maintenance personnel.


A room that can maintain the following conditions:
[When operating]
Temperature: 10 to 35ºC*
Humidity: 20 to 80%
Temperature gradient: ±10ºC/hr
Atmospheric pressure: 749 to 1040hpa
[When not operating]
Temperature: 5 to 40ºC*
Humidity: 10 to 80%
Temperature gradient: ±15ºC/hr
Atmospheric pressure: 749 to 1040hpa
Space 40 cm or more on top, 1 m or more on the front and rear, and 60 cm or more on the right and left.
100V - 127 V or 200V - 240 V parallel bi-polar power outlet with grounding
Wall outlet within the reach of supplied power cord.
Level and reinforced floor.
* It is recommended to use the server in a room where temperature can be kept between 15 and 25ºC.
Place where the rack is stabilized by the stabilizer

⚠ WARNING

Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see “Notes for Safe Handling” in Chapter 1.

- Do not install the server in non-designated places.
- Do not connect the ground wire to a gas pipe.

⚠ CAUTION

Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling“ in Chapter 1.

- Do not carry or install a rack alone.
- Do not install a rack in such a manner that its weight is imposed on a single place.
- Do not assemble or disassemble parts alone.
- Do not pull a device out of the rack if the rack is unstable.
- Do not leave more than one device pulled out from the rack.
- Do not install excessive wiring.

Do not install NEC Express5800/ft series in such places as listed below. If you locate racks or install the server in such places, the server may malfunction.

- Place where you cannot pull out the components fully.
- Place that cannot sustain the total weight of the rack and its components.
- Place where you cannot use stabilizers or where you cannot perform installation without quake-resistant engineering.
- Place whose floor is uneven or inclined.
- Place where temperatures change widely (near a heater, an air conditioner, or a refrigerator).
- Place that is subject to intense vibration.
- Place where corrosive gas (sodium chloride, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, or ozone) is generated, or a place that is close to chemicals or exposed to chemicals.
- Place whose floor is covered with non-antistatic carpet.
- Place that may be subject to falling objects.
- Place that is close to some equipment that generates intense magnetic field (e.g., TV set, radio, broadcasting/communications antenna, power transmission wire, and electromagnetic crane). (If unavoidable, contact your sales agent to request proper shield construction.)
- Place where the power cords of the server must be connected to outlets that share the outlet of another device with large power consumption.

- Place that is close to some equipment that causes power noises (e.g., sparks caused by power-on/off using a relay). If you must install the server close to such equipment, request your sales agent for separate power cabling or noise filter installation.

Installing the device to the rack (N8140-74/92/93/94/98/99)

Install this device to the rack.

Installing the device to our company's racks (N8140-74/92/93/94/98/99) or to other company's racks is explained in this section.

⚠ WARNING

Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see "Notes for Safe Handling" in Chapter 1.

- Do not use the product with the unspecified rack.
- Do not use the product at non-designated places.

⚠ CAUTION

Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see "Notes for Safe Handling" in Chapter 1.

- Do not install or remove a rack alone.
- Do not install the server with the cover removed.
- Do not squeeze your fingers in the product.

IMPORTANT:

Temperature increase inside the rack and airflow

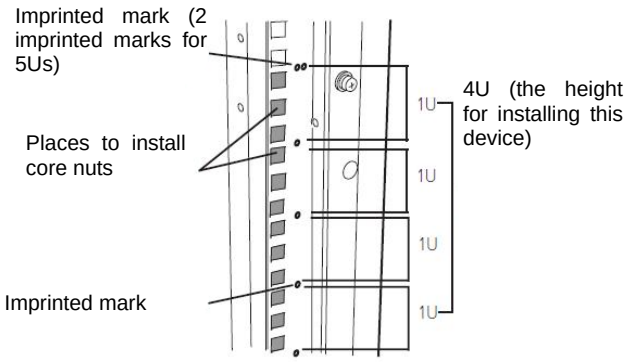
If you install several components or the ventilation isn't good inside the rack, the internal temperature may increase due to heat emitted from the components. When the operating temperatures of NEC Express5800/ft series (10 to 35°C) are exceeded, there is a risk of malfunction. You must take adequate precautions and measures for airflow inside the rack as well as in the room so that the internal temperature can be kept within this range during operation.

- Required tool

To install the device to the rack, a Phillips-head screw drive is required.

- Checking the place to install

Decide the place (height) to install. To keep balance, install it as low as you can on the rack. To install the rack, the height for 4U is required.



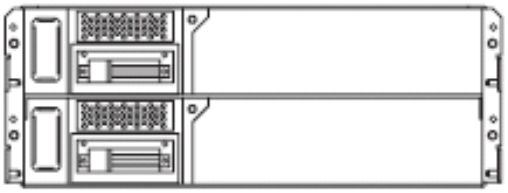
IMPORTANT:

To install this device to the rack, the space for 1U is required for installing the USB compatible floppy disk drive, in addition to the space for 4U.

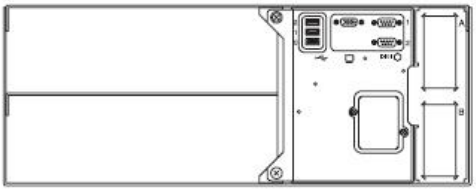
Next to the square hole of the rack, an imprinted mark is placed for 1U (This is the unit to show the height of the rack). This device is as high as 4U (about 176 mm), so install it between the imprinted marks that indicate the height of 4U.

- Installing this device

Follow the steps below to set the 4U chassis to the rack.



Front side of 4U chassis



Back side of 4U chassis

IMPORTANT:

4U chassis weighs about 10 Kg. To mount, remove or replace it, be sure to hold it with two or more people.

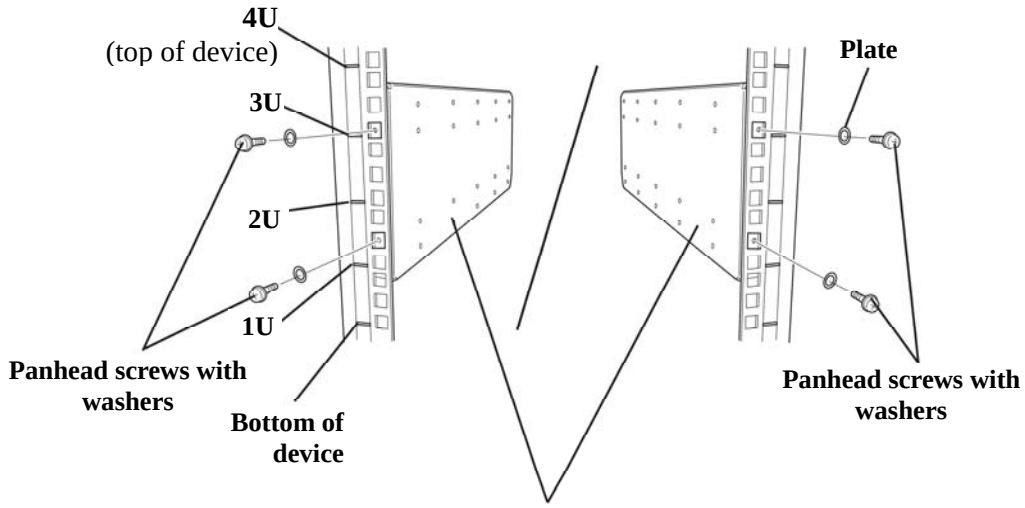
The following are the required accessories. Check if you have them all.

Tool Name	Qty
- Bracket	2
- Panhead screw	4
- Washer for panhead screw	4
- Plate screw (short)	8
- Plate screw (long)	4
- Washer for plate screw	12

TIPS:

Core nuts (8 pieces) are not included. Use the core nuts that are attached to the rack.

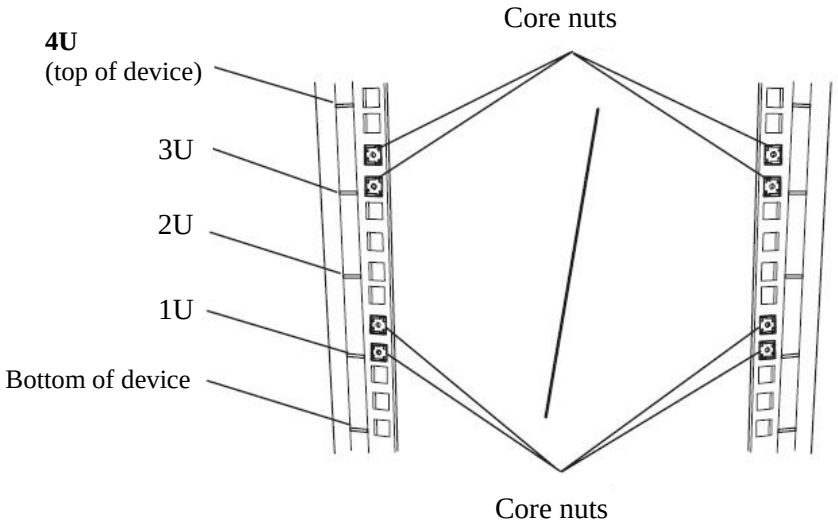
1. If the rack has front and rear doors, read the instruction that comes with the rack, and open them.
2. Install the brackets from the rear side of the rack. Install the brackets with its flat side facing inside. Place them with the round screws with washers that come with the device symmetrically (total: 4). Fasten the screws tentatively not tightly.



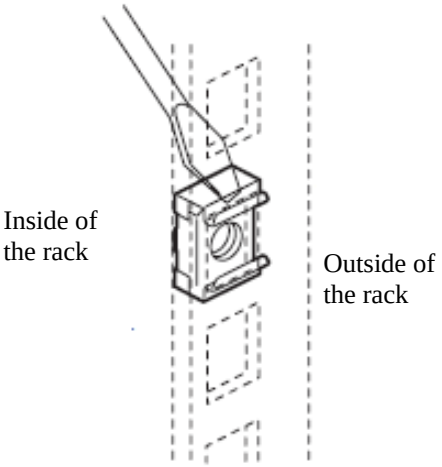
Bracket (flat sides are facing inside)

3. Fix the core nuts to the front side of the rack.

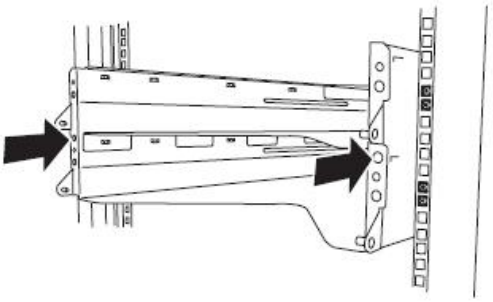
   Attach them symmetrically (total: 8 core nuts).



Fix a core nut from inside of the rack.
Hook either of the clips of the core nut to a square hole of the rack, and hook the other clip to a hole by a flat-blade screwdriver.

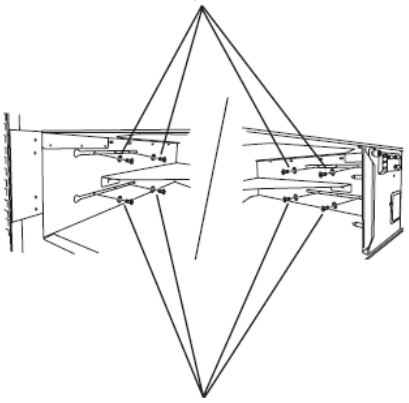


4. Insert the 4U chassis from the front side of the rack.



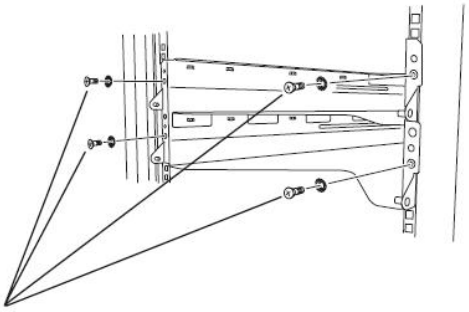
5. Tentatively fasten the washers and plate screws (short) to the 4 places on the front and back sides (total: 8) from the rear.

Washers and plate screws (short)



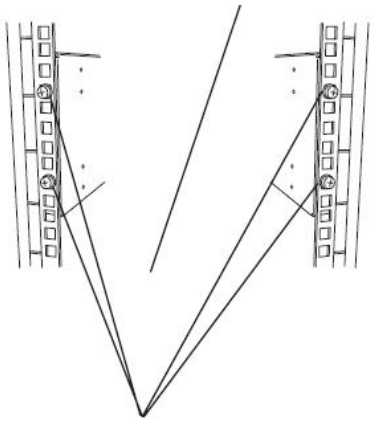
Washers and plate screws (short)

6. Fasten tightly the washers and round screws (long) to the 2 places on the left and right sides (total: 4) from the front.



Washers and plate screws (long)

7. Fasten tightly the 4 round screws on the back side and the 8 plate screws on the side panels (which you fastened tentatively).



Panhead screws on the side panels

Plate screws on the side panels

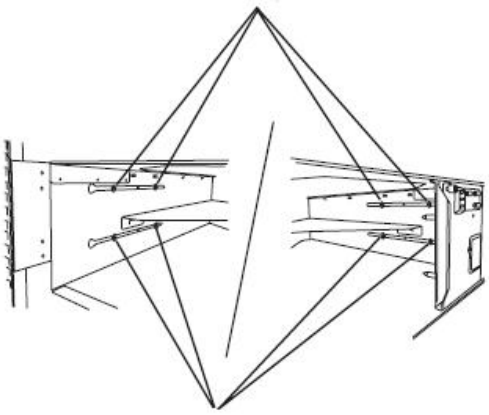
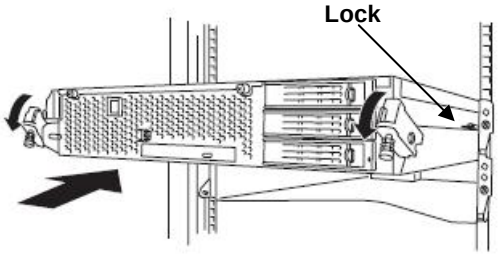


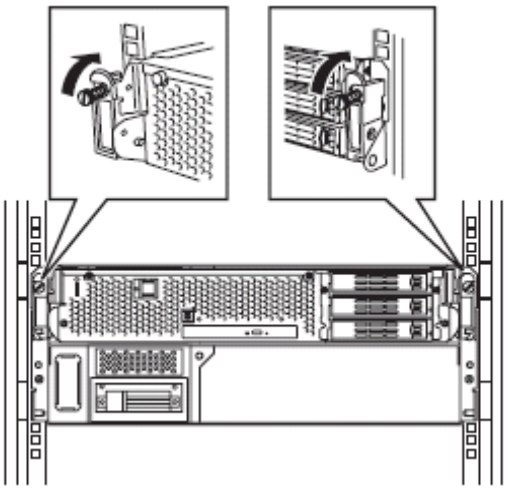
Plate screws on the side panels

8. Mount the CPU/IO module 0.

   Mount the module while lowering the lock so the module stacks on the way.



9. Fasten the levers on the left and right sides with screws.



10. Mount the CPU/IO module 1 in the same way.

Unmounting the device from the rack (N8140-74/92/93/94/98/99)

Follow the steps below and unmount the device from the rack.

⚠ CAUTION

Observe the following precautions to use the server safely. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling“ in Chapter 1.

- Do not carry or install a rack alone.
- Do not squeeze your fingers in the product
- Do not impose a weight on the device when it is pulled out from the rack.
- Do not pull a device out of the rack if the rack is unstable.
- Do not leave more than one device pulled out from the rack.
- Do not pull the device from the rack while it is operating.

1. Check that the device is powered off, and remove all the power cords and interface cables that are connected to the device.
2. Remove the front bezel.
3. Loosen the screws on the left and right sides of the front panel of the CPU/IO module and release the lock by pulling the ejector toward you.
4. Pull out the CPU/IO module gently from the rack.

IMPORTANT:

- When you pull out the device, do not load anything on its top. It is dangerous, since the device becomes unstable and it may fall.
- Do not hold the handle on the front side or the convex part on the back side. To move the device, hold the bottom.
- Since the device is locked and can not be pulled out, pull it out after releasing the lock by lowering the lock on the side of the CPU/IO module.

5. Hold tightly when you unmount 4U chassis from the rack,.

To remove the mechanical parts of the rack, see the installation procedure.

INSTALLING the Tower Conversion Kit (N8843-002)

This section describes how to install the rack-mount model of NEC Express5800/ft series without using the dedicated rack.

IMPORTANT:

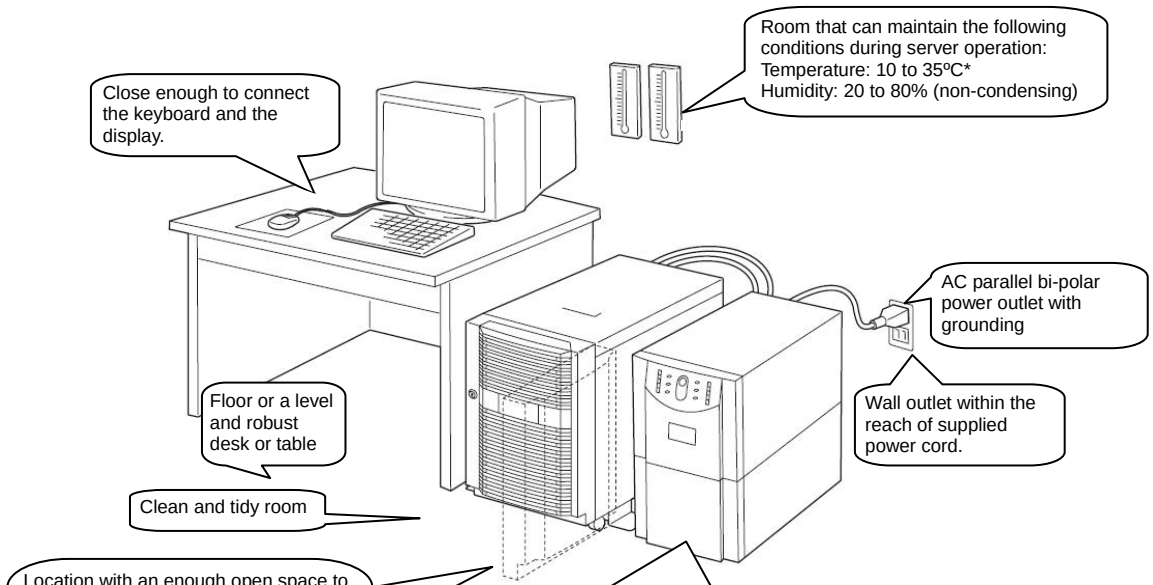
NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to install it.

Select a suitable site for tower model.

⚠ CAUTION

Observe the following precautions to use the equipment safely. There are risks of a burn, injury, or damage to physical assets. For details, see “Notes for Safe Handling“ in Chapter 1.

- Remove all modules before moving the equipment.
- Do not install the equipment in non-designated places.


Room that can maintain the following conditions during server operation:
Temperature: 10 to 35ºC*
Humidity: 20 to 80% (non-condensing)
Close enough to connect the keyboard and the display.
AC parallel bi-polar power outlet with grounding
Floor or a level and robust desk or table
Wall outlet within the reach of supplied power cord.
Clean and tidy room
Location with an enough open space to fully open the front bezel, at least 1 m from the front, 50 cm .from the rear, and 15 cm from the sides of the server (The front bezel extrudes about 50 mm from the right side of the server when fully opened.)
Uninterruptible Power Supply (UPS) to prevent momentary voltage drop due to power failure or lightning *
* Optional. UPS is recommended for best use of features of NEC Express5800/ft series.

* It is recommendable to use the server in a room where temperature can be kept between 15 and 25ºC.

Do not install NEC Express5800/ft series in such places as listed below. Otherwise, the server may malfunction.

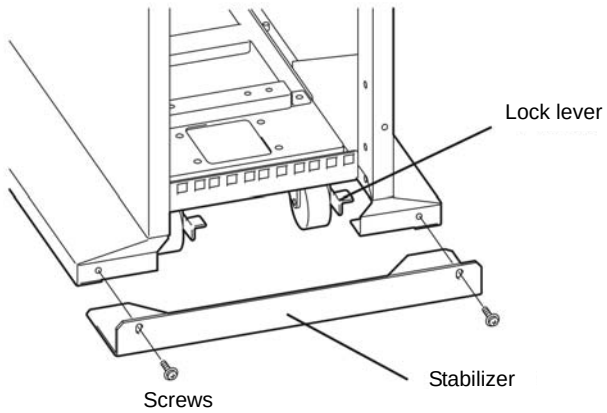
- Place where temperatures change widely (near a heater, air conditioner, or refrigerator).
- Place that is subject to intense vibration.
- Place where corrosive gas (sodium chloride, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, or ozone) is generated, or a place that is close to chemicals or exposed to chemicals.
- Place whose floor is covered with non-antistatic carpet.
- Place that may be subject to falling objects.
- Place where you may step or trip on the power cords or interface cables.
- Place that is close to some equipment that generates intense magnetic field (e.g., TV set, radio, broadcasting/communications antenna, power transmission wire, and electromagnetic crane). (If unavoidable, contact your sales agent to request proper shield construction.)
- Place where the power cord of the server must be connected to an AC outlet that shares the outlet of another device with large power consumption.
- Place that is close to some equipment that causes power noises (e.g., sparks caused by power-on/off using a relay). If you must install the server close to such equipment, request your sales agent for separate power cabling or noise filter installation.

It takes at least three people to carry the server; hold it firmly by its bottom and place it slowly on the selected site.

IMPORTANT:

Do not hold the front bezel to lift it, or it may detach, fall down, and break the server.

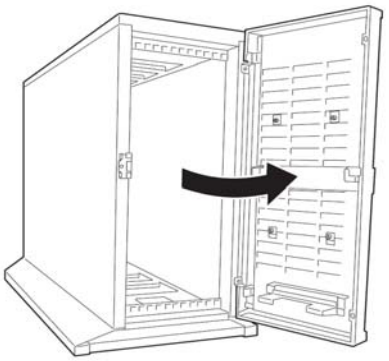
After placing the main cabinet, lock its two front casters out of four and screw the attached four stabilizers on the cabinet adjusting their height.



Steps to Install the Rack-mount Model to the Tower Conversion Kit

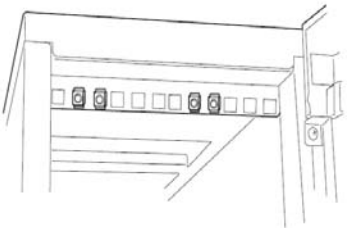
Follow the procedure below to install the devices to the tower conversion kit.

1. Open the front door of the tower conversion kit.
If the door is locked, use the server-accessory key to unlock.

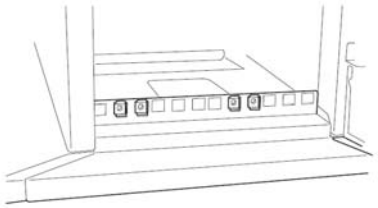


2. Confirm the spots to fix 8 core nuts on the front of the chassis.
See the figure on the right for where to fix the core nuts
(4 on the front top and 4 on the front bottom.)

8 core nuts have been installed on the front of the chassis.

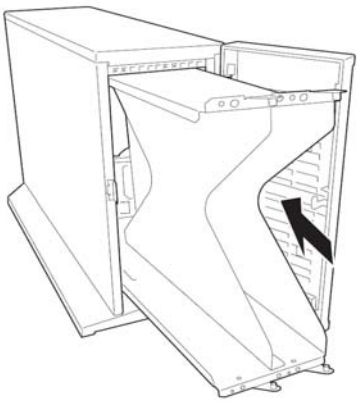


Tower conversion kit (on the front top)

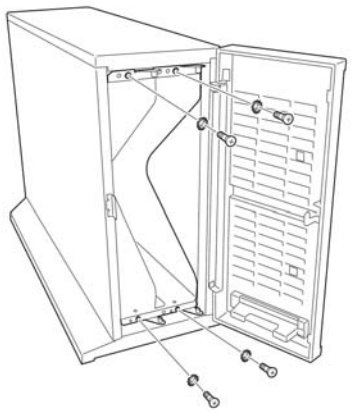


Tower conversion kit (on the front bottom)

3. Insert the bracket from the front of the conversion kit. Tuck the bracket firmly to the back.

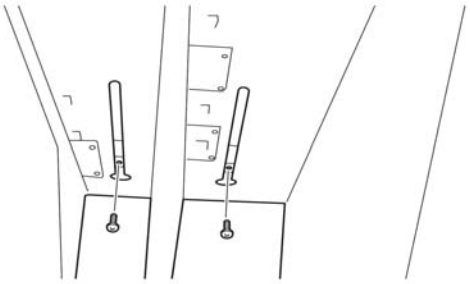


4. Fix the bracket with four washers and countersunk screws (long ones), two at the top and two at the bottom.

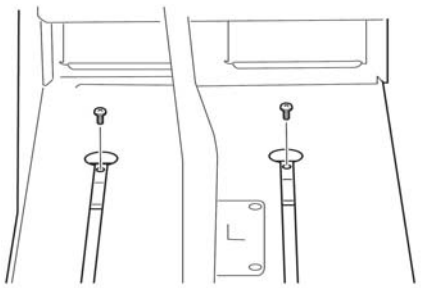


5. Fix the bracket with 4 washers and countersunk screws. See the figure on the right for where to fix the screws (2 screws for the backside on the top, and 2 for the bottom of the tower conversion kit).

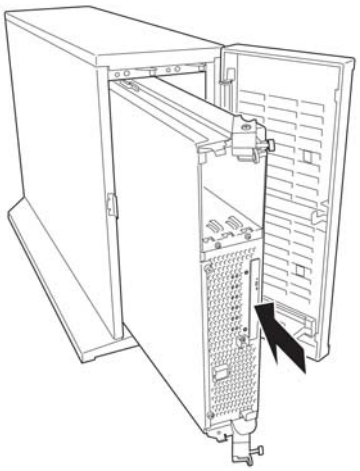
Top (toward the backside)



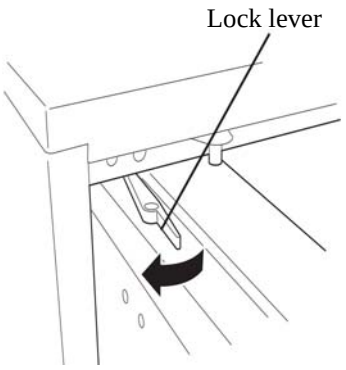
Bottom (toward the backside)



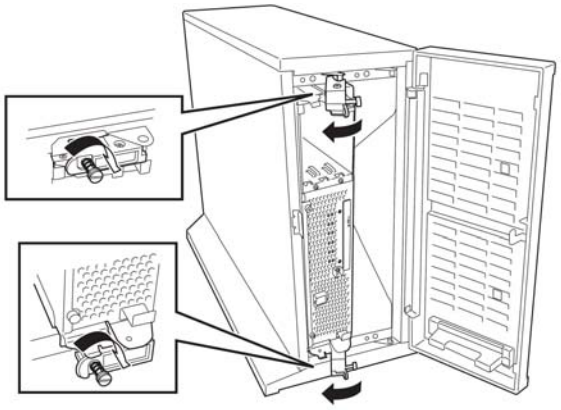
6. Insert the device slowly and securely into the bracket.



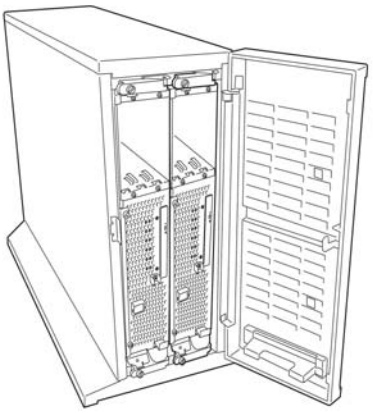
If it becomes rocked and cannot insert any further, push and keep the rock lever to the left as push the device further inside.



7. Close the lever on the top and the bottom of the device. Fix the device to the bracket with clinchers.



8. Take steps 6 to 8 to fix the other device to the bracket.



Connect peripheral devices to NEC Express5800/ft series

The server provides connectors for a wide variety of peripheral devices on its front and rear. The figure on the next page illustrates available peripheral devices for the server in the standard configuration, and locations of the connectors for the devices. After connecting the peripheral devices, connect the provided power cords with the server, and then plug the power cords into the power outlet.

⚠ WARNING

Observe the following precautions to use the server safely. There is a risk of a death or serious injury. For details, see “Notes for Safe Handling“ in Chapter 1.

- Do not hold the power plug with a wet hand.
- Do not connect the ground wire to a gas pipe.

⚠ CAUTION

Observe the following precautions instructions for the safe use of the equipment. There is a risk of a burn, personal injury, or damage to physical assets. For details, see “Notes for Safe Handling“ in Chapter 1.

- Do not plug the power cord in a nonconforming outlet.
- Do not plug too many cords in a single outlet.
- Do not plug the cord insecurely.
- Do not use nonconforming power cords.

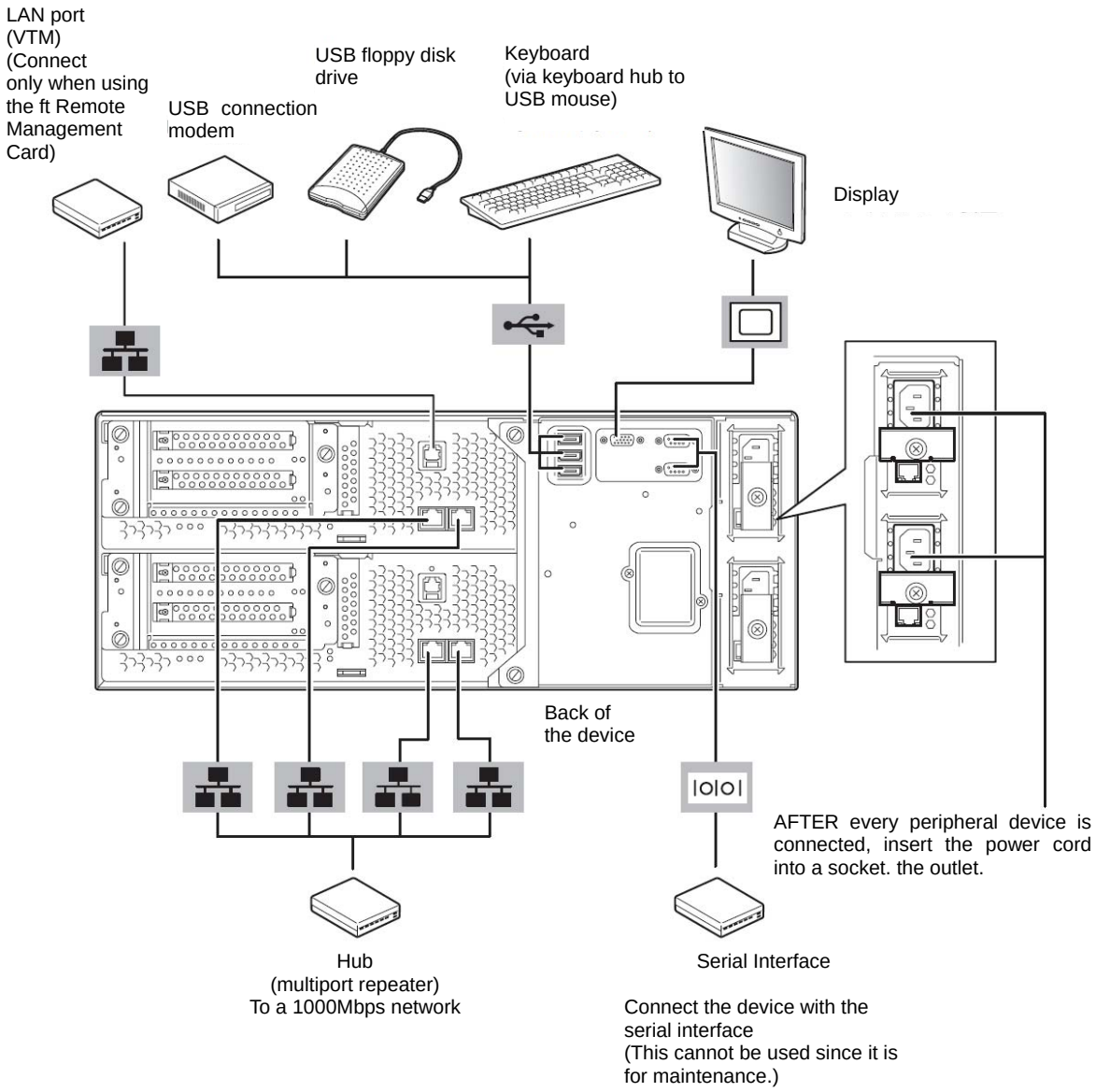
IMPORTANT:

- Power off the server before connecting peripheral devices, with the exception of peripherals with USB interface. Connecting a powered peripheral device to the powered server will cause malfunctions and failures.
- To connect a third-party peripheral device or interface cable to the server, check with your sales agent to see if they are compatible with NEC Express5800/ft series. Some third-party devices may not be used with the server.
- The total cable length of SCSI device connections is up to 6 m, including the internal SCSI cables.
- The serial port connectors are reserved for maintenance.
- Place the USB floppy disk drive on the server. Space of 1U is needed to put it on the server.

IMPORTANT:

Connection of optional devices

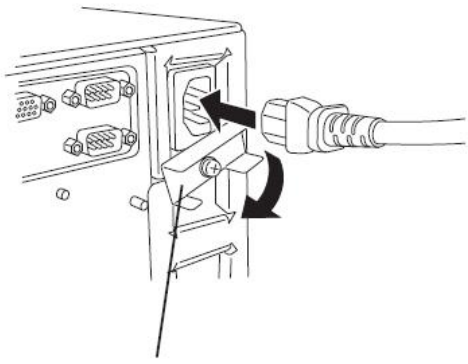
- In the case of standard configuration, you need to complete setup of the operating system before mounting optional PCI cards or hard disks that you purchased separately.
- If N8803-035 is mounted, be sure to connect cables to the FC array unit before going on to the next step.



Rotate the stopper clockwise, and insert the power cords to the AC inlets of the power unit.

Connect the plug at the other end of the power cord to a wall outlet with parallel double-pole grounds provided or to an uninterruptible power supply (UPS).

To use the functions of the server, you should connect the server to the UPS.



Stopper

IMPORTANT:

- Be sure to use both of the power cords to make the server fault-tolerant.
- After connecting the power cords, wait at least 30 seconds before pressing the power switch.
- By pressing the power switch, the power switch's fans starts to rotate.

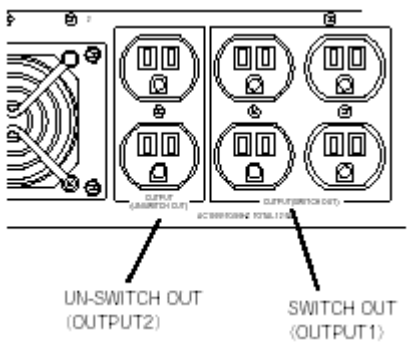
To connect the power cords from the server to an uninterruptible power supply (UPS), use service outlets on the rear of the UPS.

The UPS service outlets are categorized into two groups: SWITCH OUT and UN-SWITCH OUT. (They may be called "OUTPUT1" and "OUTPUT2".)

To restrict the power supply from ESMPRO/AutomaticRunningController, connect the power cable to SWITCH OUT.

For constant power supply, connect the power cords to a UN-SWITCH OUT outlet. (Connect the modem that is in service for 24 hours to this outlet.)

<Example>



When the power cords from the server are connected to a UPS, change the BIOS setup of the server to link with power supply from the UPS.

Select [AC-LINK] from [Server] on the BIOS setup utility and change parameters. See the separate volume of User's Guide for details.

Chapter 4

Windows Setup

This chapter describes procedures such as configuring OS Boot Monitoring function, setting dual LAN configuration, and setting dual disk configuration.

Before starting Setup

Read this section before starting setup.
This chapter describes two types of setup.

Procedures to Install and Reinstall the Windows OS

Installing and Reinstalling Windows Server 2003 x64 Edition

"Manual Install" is required to install/reinstall OS (Windows), the disk drivers and other utilities manually and individually.

Installing Windows Server 2003

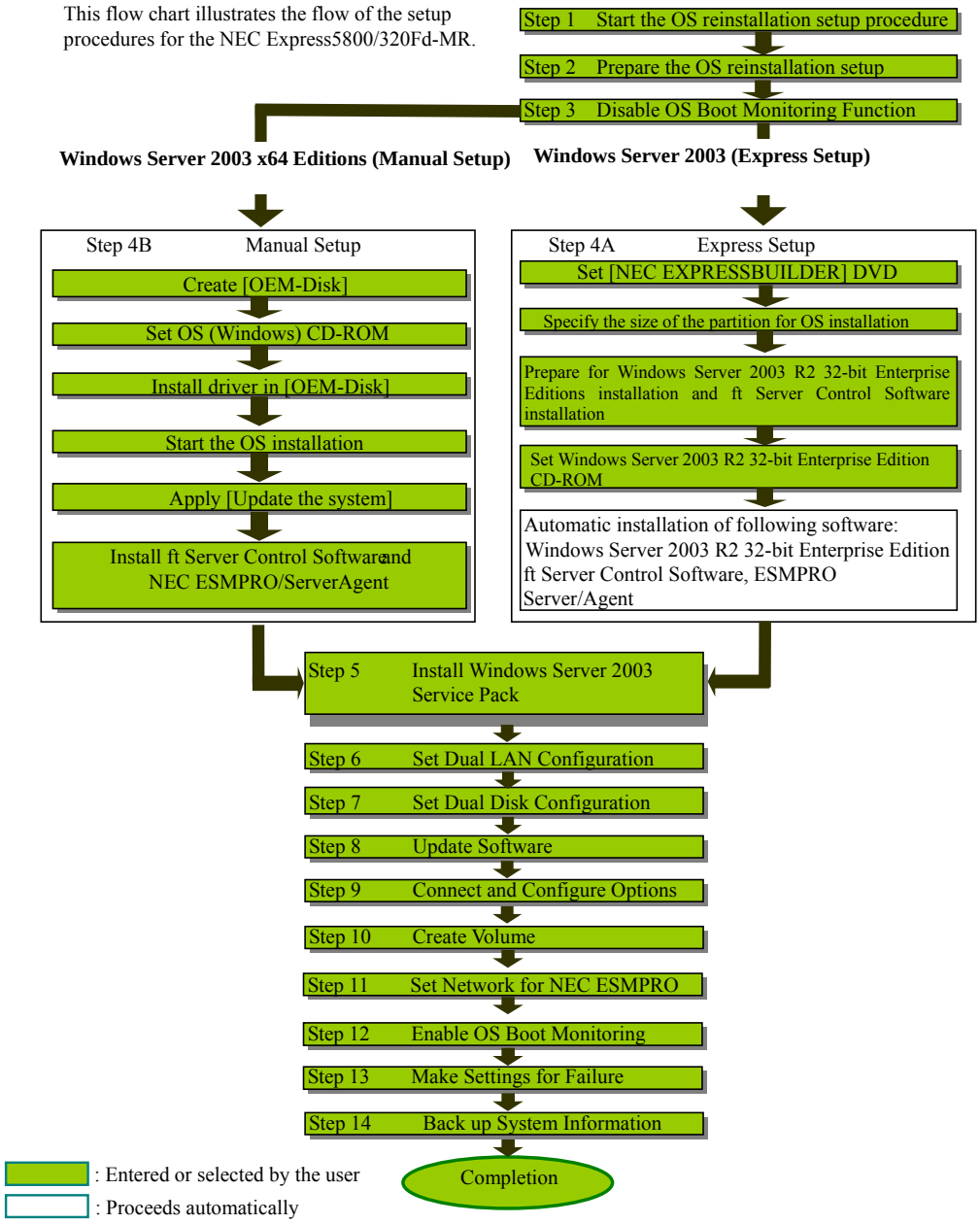
Use NEC EXPRESSBUILDER to install/reinstall Windows Server 2003.

"Express Setup" is the setup program that is specific to NEC Express5800/ft series.
NEC EXPRESSBUILDER DVD, a server accessory, runs this setup program. Express Setup enables automatic install of Windows Server 2003 and other various utilities.

Refer to "Procedure to Install and Reinstall OS." Use this setup step if you want to reinstall OS or use the HDD with a partition setting that is different from the default partition setting.

SETUP FLOW

0


This flow chart illustrates the flow of the setup procedures for the NEC Express5800/320Fd-MR.
Step 1 Start the OS reinstallation setup procedure
Step 2 Prepare the OS reinstallation setup
Step 3 Disable OS Boot Monitoring Function
Windows Server 2003 x64 Editions (Manual Setup)
Windows Server 2003 (Express Setup)
Step 4B Manual Setup
Create [OEM-Disk]
Set OS (Windows) CD-ROM
Install driver in [OEM-Disk]
Start the OS installation
Apply [Update the system]
Install ft Server Control Software and NEC ESMPRO/ServerAgent
Step 4A Express Setup
Set [NEC EXPRESSBUILDER] DVD
Specify the size of the partition for OS installation
Prepare for Windows Server 2003 R2 32-bit Enterprise Editions installation and ft Server Control Software installation
Set Windows Server 2003 R2 32-bit Enterprise Edition CD-ROM
Automatic installation of following software: Windows Server 2003 R2 32-bit Enterprise Edition ft Server Control Software, ESMPRO Server/Agent
Step 5 Install Windows Server 2003 Service Pack
Step 6 Set Dual LAN Configuration
Step 7 Set Dual Disk Configuration
Step 8 Update Software
Step 9 Connect and Configure Options
Step 10 Create Volume
Step 11 Set Network for NEC ESMPRO
Step 12 Enable OS Boot Monitoring
Step 13 Make Settings for Failure
Step 14 Back up System Information
: Entered or selected by the user
: Proceeds automatically
Completion

Step 1: Procedure to Install and Reinstall OS

The following explains OS install and reinstall:

IMPORTANT:

- "Express Setup" deletes all data on the disk used for installation/reinstallation, as "Express Setup" formats the entire disk. If there is any data partition other than the system partition containing OS for reinstallation, you must back up the important data in the data partition first and then start "Express Setup."
- Do not apply service packs to NEC Express5800/ft series based on your judgment. If you want to apply service packs, contact your sales agent for the latest application and apply service packs to NEC Express5800/ft series.

Following items are required for install/reinstall:

For Windows Server 2003 x64 Editions

- NEC EXPRESSBUILDER DVD
- ft Server Control Software UPDATE CD-ROM

  This CD-ROM is used to update ft Server Control Software; it may not be shipped with the equipment. (Not included if "NEC EXPRESSBUILDER"DVD contains the latest version of software programs at the time of shipment.)
- Microsoft® Windows Server™ 2003 R2, Enterprise x64 Editions Disk 1
  (hereinafter referred to as "Windows Server 2003 x64 Editions CD-ROM")
  Microsoft® Windows Server™ 2003 R2, Enterprise x64 Edition Disk 2
  (One set consists of 2 disks.)
- Windows Server 2003 x64 Editions Service Pack CD-ROM
  Apply Windows Server 2003 x64 Editions Service Pack 2.
- Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER (or one 1.44MB, DOS-formatted 3.5-inch floppy disk.)
- User's Guide (Setup) (this manual)
- User's Guide

For Windows Server 2003

- NEC EXPRESSBUILDER (DVD)
- ft Server Control Software UPDATE CD-ROM

  This CD-ROM is used to update ft Server Control Software; it may not be shipped with the equipment. (Not included if "NEC EXPRESSBUILDER"DVD contains the latest version of software programs at the time of shipment.)
- Microsoft® Windows Server™ 2003 R2 32-bit Enterprise Edition Disk 1
  (hereinafter referred to as "Windows Server 2003 CD-ROM")

Microsoft® Windows Server™ 2003 R2 32-bit Enterprise Edition Disk2
(One set consists of two disks.)

- Windows Server 2003 Service Pack CD-ROM
  It is recommended to apply the latest service pack supported by ft Server.
- User's Guide (Setup) (this manual)
- User's Guide

IMPORTANT:

- About the latest release of ft Server Control Software and purchase of the latest version of its Update CD-ROM, ask your sales agent.

Before starting the setup, decide the size of the partition for the operating system.

Size of the Partition to be Created

For Windows Server 2003 x64 Editions:

The required minimum size of a partition to install the system can be obtained from the following formula:

Size required for installation + paging file size + dump file size

Size required for installation	= 5,900MB (Windows Server 2003 R2)
Paging file size (recommended)	= size of memory mounted* × 1.5
Dump file size	= size of memory mounted* + 1MB

IMPORTANT:

- The above paging file size is necessary for collecting debug information (memory dump). The boot volume requires a paging file size that is large enough to store the dump file. Set an adequate paging file size for the entire system, since an inadequate amount of paging file might cause a harvest of incorrect debug information (memory dump).
- The maximum size of the dump file is "mounted memory size + 1MB," regardless of the mounted memory and the debug information (the types of memory dump).
- If you need to install other applications, add the capacity of hard disk required for those applications.

For example, if memory of 1GB is mounted, the required minimum partition size obtained from the above formula is as follows:

5,900MB + (1,024MB × 1.5) + 512MB + 1MB = 7,949MB

For Windows Server 2003:

You can obtain the required minimum size of the partition to install the system from the following formula:

Size required for installation + paging file size + dump file size

Size required for installation	= 5,300MB (Windows Server 2003 R2)
Paging file size (recommended)	= size of memory mounted* × 1.5
Dump file size	= size of memory mounted* + 12MB

IMPORTANT:

- The above paging file size is necessary for collecting the debug information (memory dump). If a value smaller than the "Recommended" one is set for the initial size of the paging file, correct debug information (memory dump) may not be collected.
- The maximum paging file size is 4095MB in a partition. If 1.5 times the size of mounted memory is larger than 4095MB, set the size at 4095MB.
- If the size of mounted memory is larger than 2GB, the maximum size of dump file is "2048MB+12MB."

TIPS: The mounted memory size means the total of memory installed on a single CPU/IO module.

For example, if memory of 1GB is mounted, the required minimum partition size obtained from the above formula is as follows:

$$5{,}300\text{MB} + (1024\text{MB} \times 1.5) + (1024\text{MB} + 12\text{MB}) = 7{,}842\text{MB}$$

Step 2: Prepare for Express Setup

Before starting Express Setup, be sure to do the following. You can set up properly only when you make those preparations.

2-1: Prepare NEC Express5800/ft series

With the power of NEC Express5800/ft series off, follow the steps below:

1. Prepare NEC Express5800/ft series.

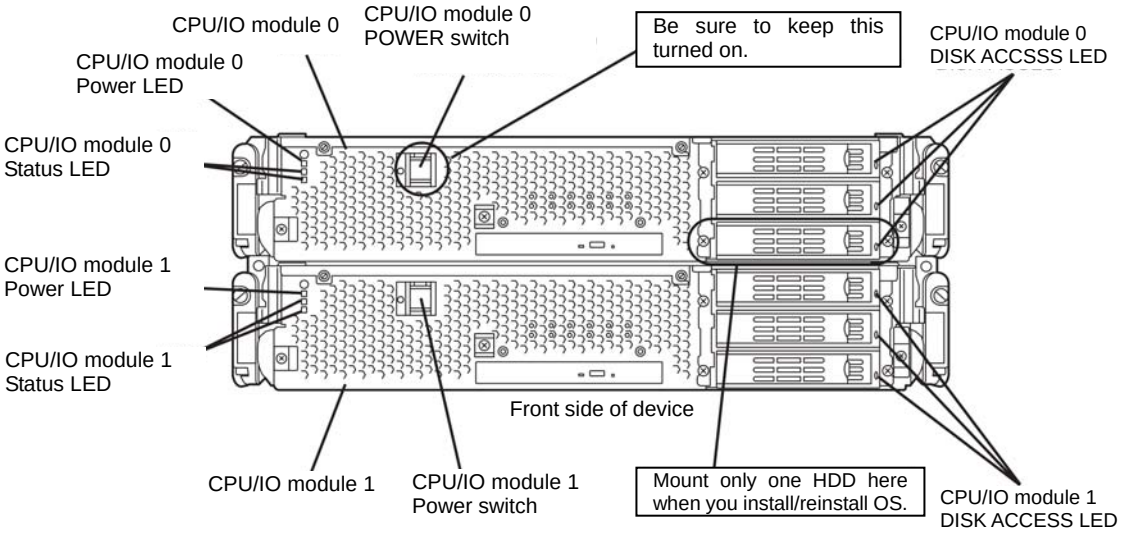
- Mount the modules for both systems.
- Mount only one hard disk to the Slot 1 of the CPU/IO module 0.
- Remove all LAN cables.
- Remove optional SCSI devices such as a tape device from the SCSI connector.
- Remove cables from the connectors attached to the Fibre Channel board.

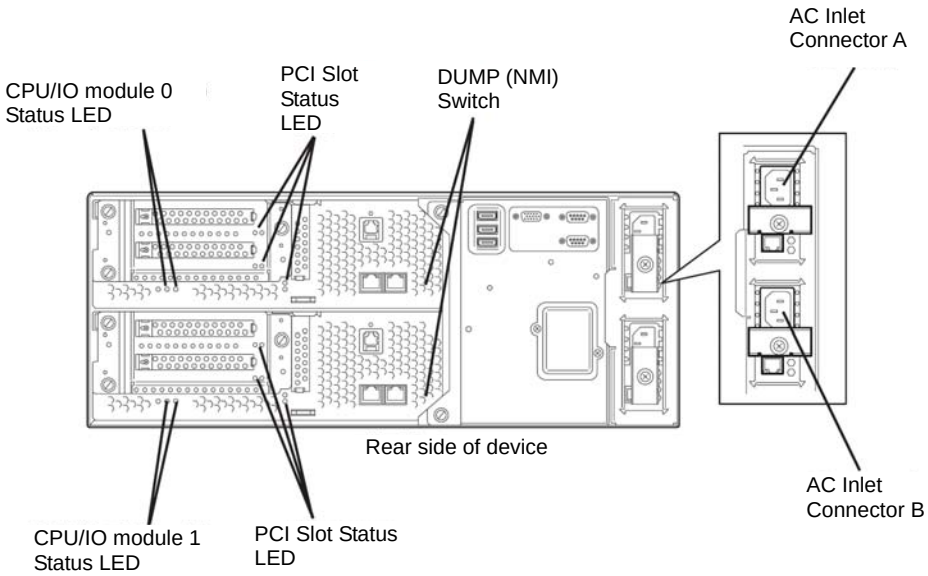
IMPORTANT:

Mount only one HDD to the designated slot of the designated CPU/IO module. If multiple HDDs are mounted, the hard disk to install OS cannot be determined.

2. Prepare the installation from the CPU/IO module 0. Mount a HDD to the designated place when installing the OS.

The location of the parts required for operation and checking are shown below:


CPU/IO module 0
CPU/IO module 0 POWER switch
Be sure to keep this turned on.
CPU/IO module 0 DISK ACCSSS LED
CPU/IO module 0 Power LED
CPU/IO module 0 Status LED
CPU/IO module 1 Power LED
CPU/IO module 1 Status LED
Front side of device
CPU/IO module 1
CPU/IO module 1 Power switch
Mount only one HDD here when you install/reinstall OS.
CPU/IO module 1 DISK ACCESS LED



When the AC power is on (The power cords are plugged into the wall outlet)

(1) Confirm the POWER LED of the CPU/IO module.

- If the POWER LED is illuminated, shut down the OS and unplug the AC power cord after the POWER LED turns off.
- If the POWER LED is turned off, unplug the AC power cord.

(2) Execute the operation to be taken when AC power supply is turned off.

When the AC power is off (The power cord is not plugged into the outlet)

Connect the power cords to NEC Express5800/ft series in the following order:

(1) Connect the power cord to the AC inlet A connector.

(2) Connect the power cord to the AC inlet B connector.

(3) Make sure that the CPU/IO module status LED is turned off.

Preparation is now completed.

Step 3: Disable OS Boot Monitoring Function

Check whether the power is ON and make settings for properly performing setup for later on.
This server has a function to monitor the main unit at startup. (Enabled in the configuration at shipment)
When installing/reinstalling the operating system, this monitoring function needs to be disabled; otherwise the OS may not install properly. Follow the steps in this section and make proper settings.

IMPORTANT:

If you skip the settings described here, the system will be forcefully restarted while Windows setup screen is shown and the setup will be unsuccessful. BIOS may repeat Windows setup in an invalid manner. In this case, you will need to restart the setup procedures from the beginning.

TIPS:

For details of operations for BIOS Setup Utility and parameters, see the separate volume of User's Guide.

Procedure for Changing BIOS settings

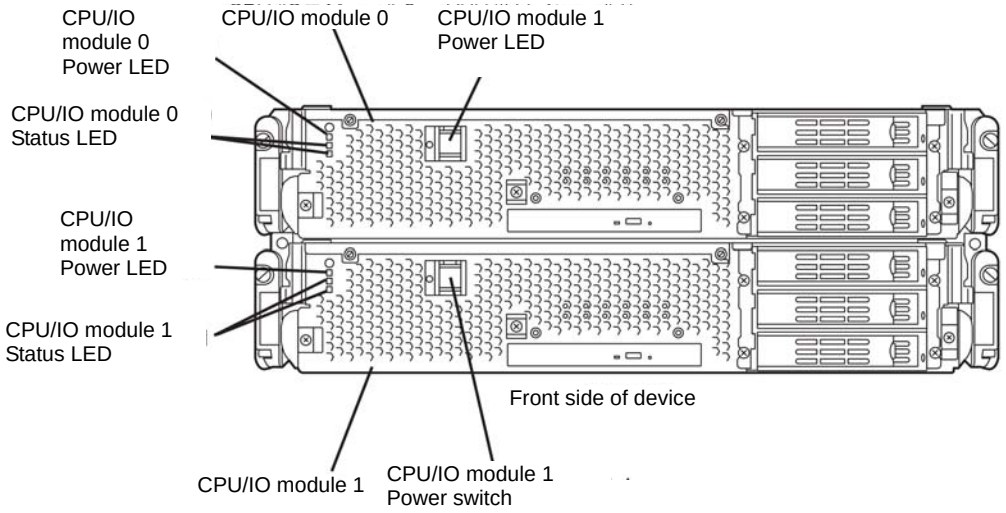
1. Turn on the display and the peripheral equipment connected to the NEC Express5800/ft series.

   CHECK:

   If the power cords are connected to a power controller like a UPS, make sure that it is powered on.

2. Detach the front bezel.

3. Press the POWER switch located on the front side of the server. (You can see LEDs lit on this side.)


CPU/IO module 0 Power LED
CPU/IO module 0
CPU/IO module 1 Power LED
CPU/IO module 0 Status LED
CPU/IO module 1 Power LED
CPU/IO module 1 Status LED
Front side of device
CPU/IO module 1
CPU/IO module 1 Power switch

IMPORTANT:

Do not turn off the power before the "NEC" logo appears.

After a while, the "NEC" logo will appear on the screen.

While the "NEC" logo is displayed on the screen, NEC Express5800/ft series performs a power-on self test (POST) to check itself. For details, see the separate volume of User's Guide.

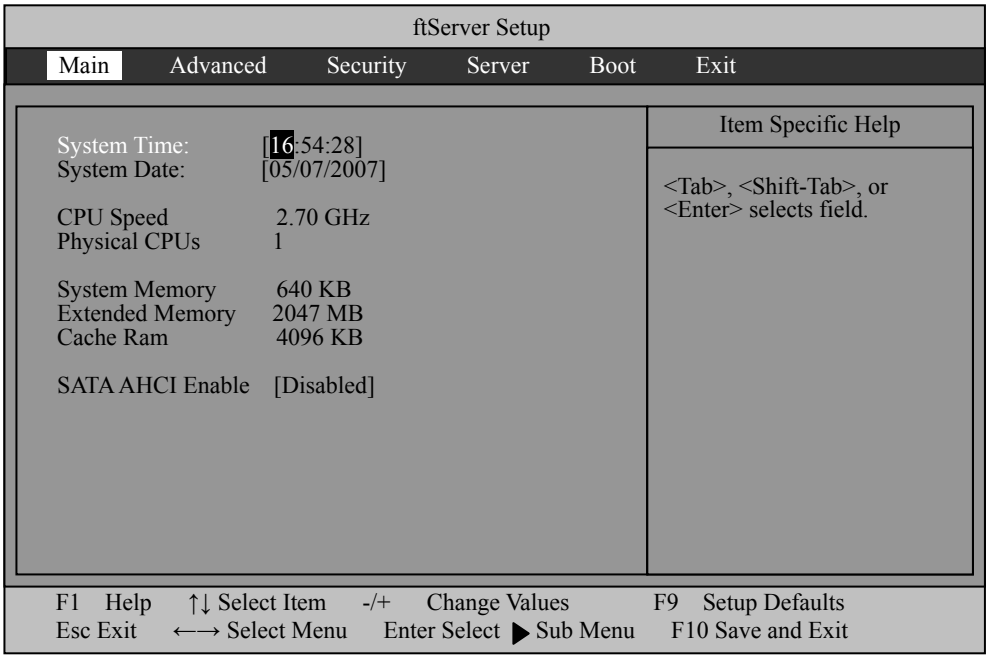
CHECK:

If the server finds errors during POST, it will interrupt POST and display the error message. See the separate volume of User's Guide.

4. When the message “Press <F2> to enter SETUP” or “Press <F2> to enter SETUP or Press <F12> to boot from Network” is displayed on the display screen, press **F2**.

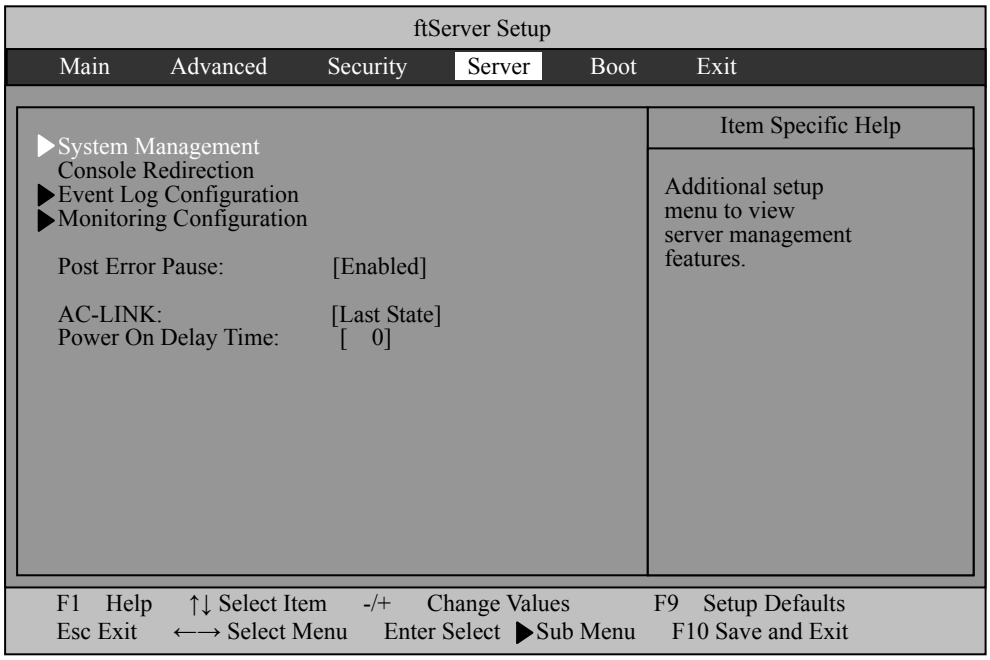
The BIOS Setup Utility “SETUP” starts and the Main menu is displayed on the screen.

Example:



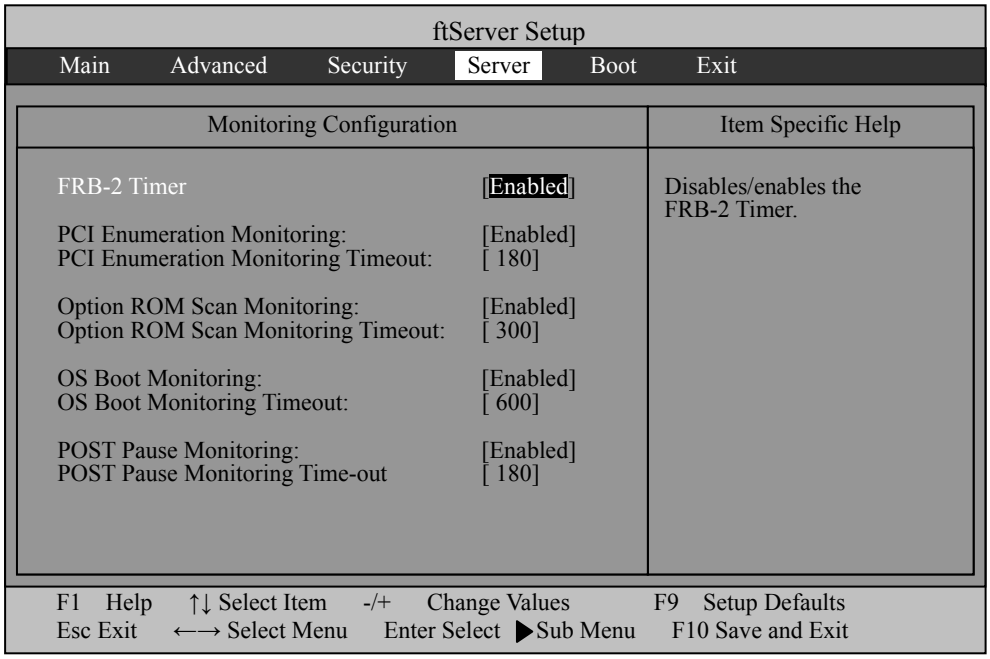
5. Move the cursor onto "Server" and select "Server."

The Server menu will be displayed:


ftServer Setup
Main Advanced Security Server Boot Exit
▶System Management
Console Redirection
▶Event Log Configuration
▶Monitoring Configuration
Post Error Pause: [Enabled]
AC-LINK: [Last State]
Power On Delay Time: [0]
Item Specific Help
Additional setup menu to view server management features.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub Menu F10 Save and Exit

6. Move the cursor onto "Monitoring Configuration" and press **Enter**.

The Monitoring Configuration submenu appears:

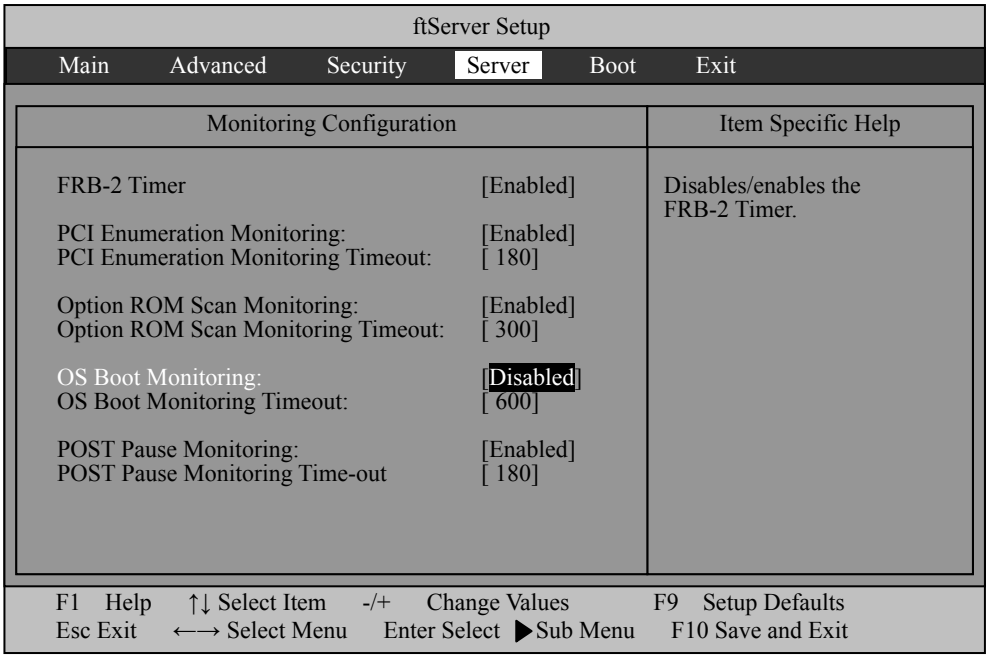

ftServer Setup
Main Advanced Security Server Boot Exit
Monitoring Configuration
FRB-2 Timer [Enabled]
PCI Enumeration Monitoring: [Enabled]
PCI Enumeration Monitoring Timeout: [180]
Option ROM Scan Monitoring: [Enabled]
Option ROM Scan Monitoring Timeout: [300]
OS Boot Monitoring: [Enabled]
OS Boot Monitoring Timeout: [600]
POST Pause Monitoring: [Enabled]
POST Pause Monitoring Time-out [180]
Item Specific Help
Disables/enables the FRB-2 Timer.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub Menu F10 Save and Exit

7. Move the cursor onto “OS Boot Monitoring” and press **Enter**.

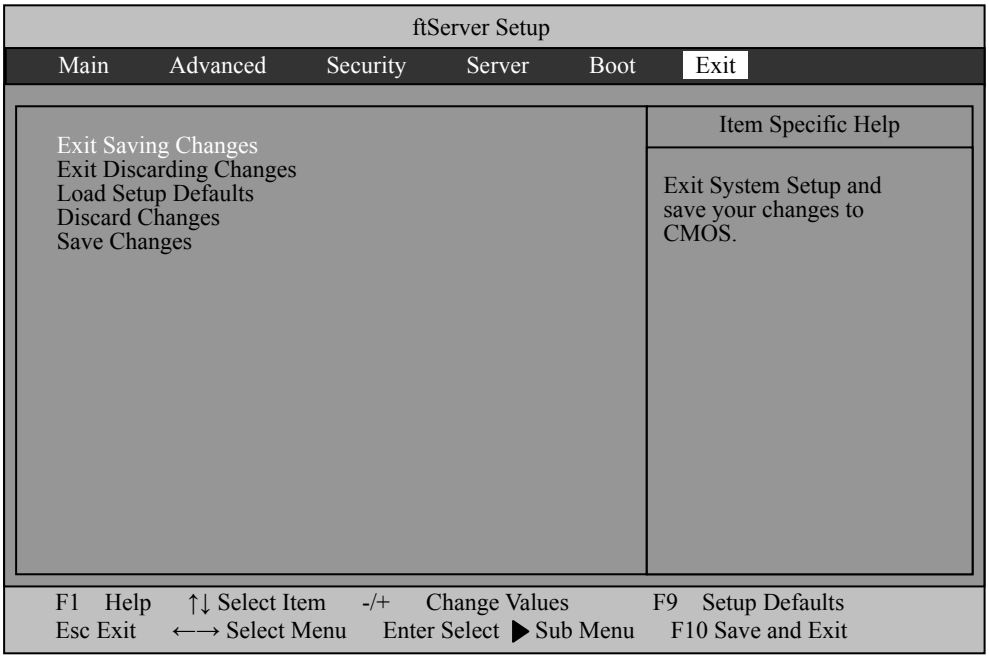
Parameters will be displayed.

8. Among the parameters, choose “Disabled” and press **Enter**.

The current display of the configuration for OS Boot Monitoring will be changed to “Disabled.”

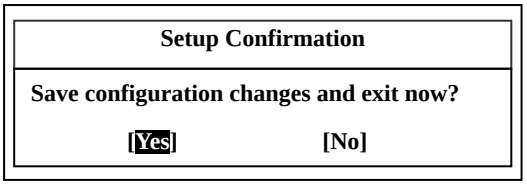

ftServer Setup
Main Advanced Security Server Boot Exit
Monitoring Configuration
Item Specific Help
FRB-2 Timer [Enabled]
Disables/enables the FRB-2 Timer.
PCI Enumeration Monitoring: [Enabled]
PCI Enumeration Monitoring Timeout: [180]
Option ROM Scan Monitoring: [Enabled]
Option ROM Scan Monitoring Timeout: [300]
OS Boot Monitoring: [Disabled]
OS Boot Monitoring Timeout: [600]
POST Pause Monitoring: [Enabled]
POST Pause Monitoring Time-out [180]
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub Menu F10 Save and Exit

9. Press the **Esc** key to go back to the Server menu, and then move the cursor and select "Exit" to display the Exit menu.



10. Move the cursor onto "Exit Saving Changes" and press **Enter**.

The confirmation window will appear.



11. Select "Yes" and press **Enter**.

The configuration data is saved, SETUP terminated, and the system rebooted.
This is the end of steps for switching OS Boot Monitoring function.

TIPS:

After the procedure above is completed, power off this server to prepare for installation. Then, referring to "Step 4A : Start Express Setup" on the next page to continue the setup.

Step 4A : Start Express Setup

Set up with the Express Setup functions of NEC EXPRESSBUILDER.

“Express Setup” is a setup method for NEC Express5800 series that allows configuration of hardware internal parameters and status and installation of OS (Windows Server 2003) and various utilities in seamless manners by using “NEC EXPRESSBUILDER” DVD which comes with the server. Use the “Express Setup” to install the OS. It performs complicated setups automatically.

Express Setup edits the information required for the setup, saves it to a floppy disk before the setup, reads the information one by one at the setup and automatically performs a series of setup processes.

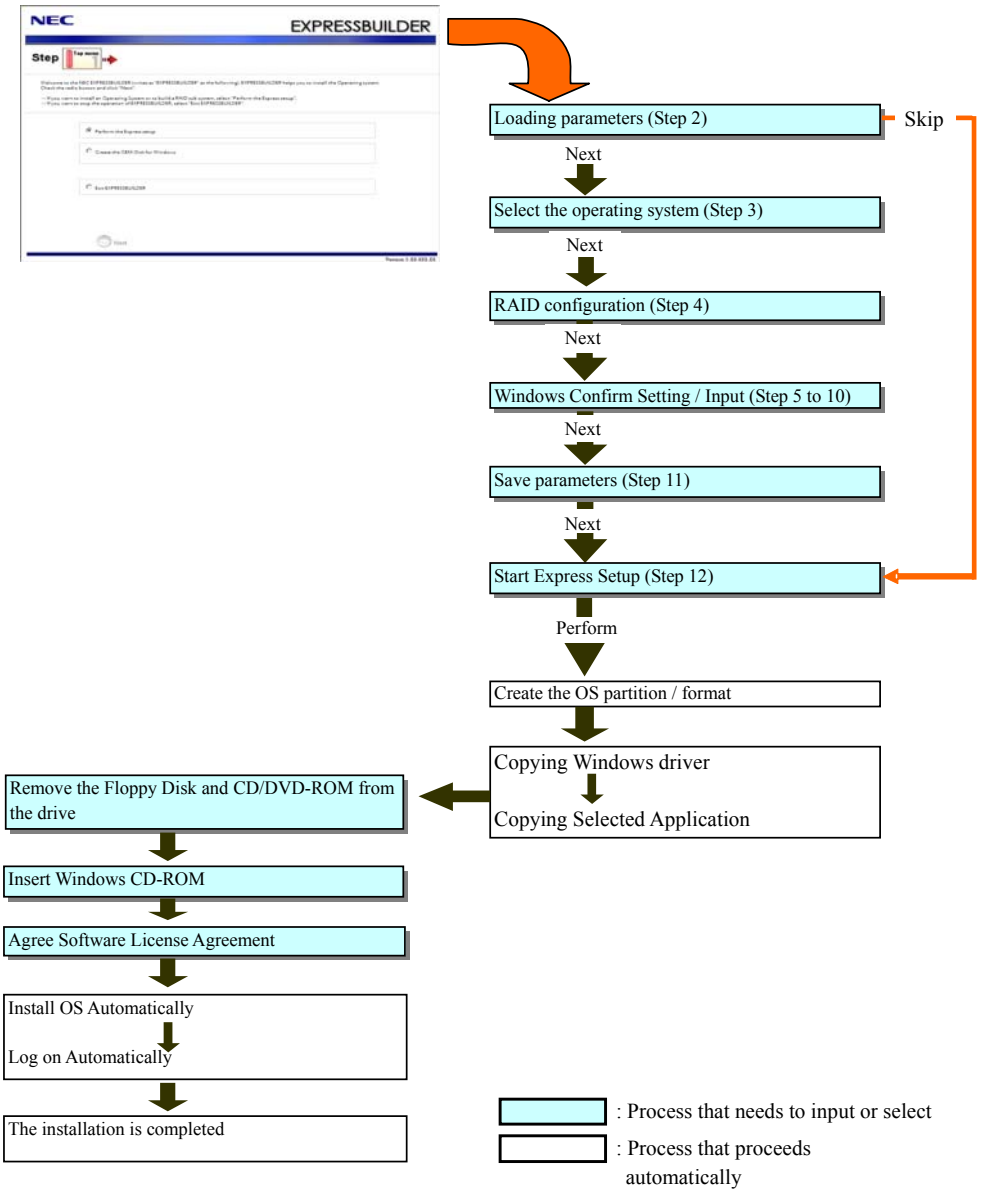
TIPS:

- Parameters file is a setup file that stores the information set/selected during Express Setup. Express Setup executes all the setup process automatically, based on this information. It is not necessary to sit by the system and check the status during the setup. If you use the parameters file that has been used last time, you can create the same setup condition as the previous one.
- You can create a parameter file in advance, by using “Parameter File” in NEC EXPRESSBUILDER.

  If you create a parameters file in advance, you can skip the options that need to be entered or selected during Express Setup. (You can create or modify the setup information in the parameters file, during Express Setup.) If any computer that is running on Windows XP/Vista/Windows Server 2003 is available, it is recommended to edit the setup information with parameters file Creator in advance.
- This device does not include the floppy disk (FD) drive by standard. Prepare an optional floppy drive when you create and use parameters file.

Flow of Setup Procedures

The following flow chart illustrates the setup procedures for Express Setup.



Setup Procedures

Express Setup precedes the setup by selecting or inputting several parameters on the wizard. You can also save the parameters to a floppy disk as a parameters file.

CHECK:

To execute Express Setup with a parameter file, one empty 1.44MB formatted floppy disk is required. Prepare an empty floppy disk in advance.

When you reinstall OS, you can skip entering the parameter in the Wizard form, by reading the parameter file that has been saved.

IMPORTANT:

In case of changing the system configuration, update the system (page 6-8).

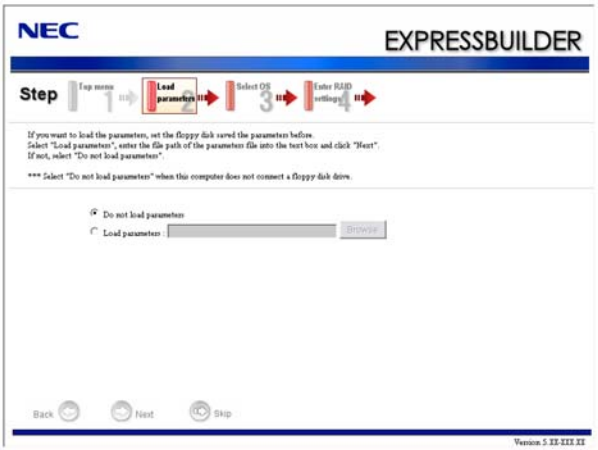
1. Turn the power of peripheral device on, and then turn on the server.
2. Insert the NEC EXPRESSBUILDER DVD into the optical disk drive of the server.
3. Press the RESET switch or press **Ctrl**, **Alt**, and **Delete** to reboot from the NEC EXPRESSBUILDER. (You may also turn off and then on again to reboot the server.)

   The system will boot from the DVD-ROM and NEC EXPRESSBUILDER starts. Select “OS installation *** default ***” from the boot selection menu.
   (If you do not hit any key, “OS installation” is selected automatically.)

   The Top menu will appear.

4. Select [Perform the Express setup] from the Top Menu, click [Next].

5. [Load parameters] steps are displayed.


NEC
EXPRESSBUILDER
Step
Top menu
Load parameters
Select OS
Enter RAID settings
If you want to load the parameters, set the floppy disk saved the parameters before.
Select "Load parameters", enter the file path of the parameters file into the text box and click "Next".
If not, select "Do not load parameters".
*** Select "Do not load parameters" when this computer does not connect a floppy disk drive.
Do not load parameters
Load parameters
Browse...
Back
Next
Skip
Version 5.XX-XXX.XX

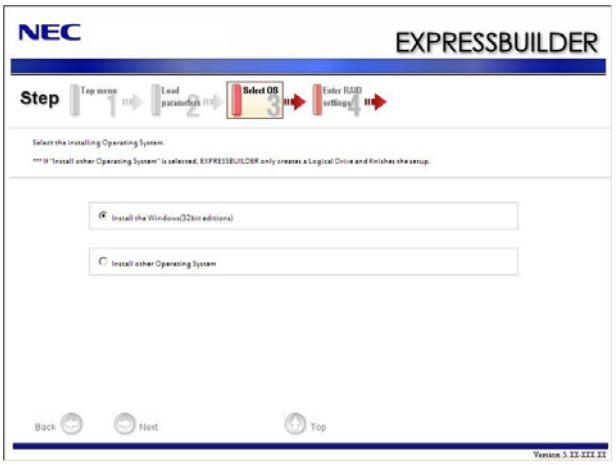
[Load parameters]
(1) Select [Do not load parameters].
(2) Click [Next].

NOTE: If a floppy disk drive is not connected, select this item.

[When you load parameters]
(1) Insert the floppy disk containing the parameters file.
(2) Select [Load parameters]; enter the file path of the parameters file into the text box.
(3) Click [Next].

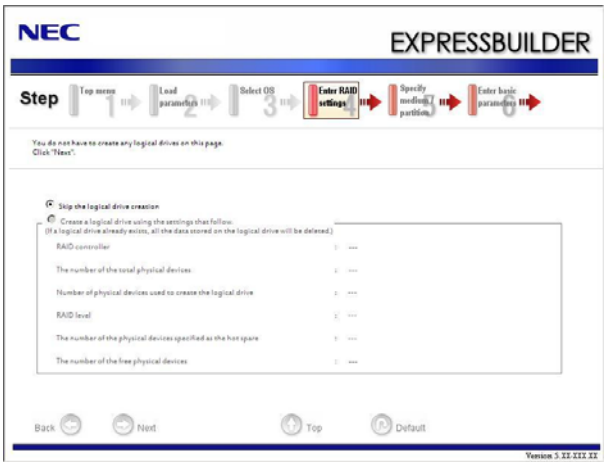
6. Select the installing Operating System.

Select [Install Windows (32-bit editions)] from the menu, click [Next].



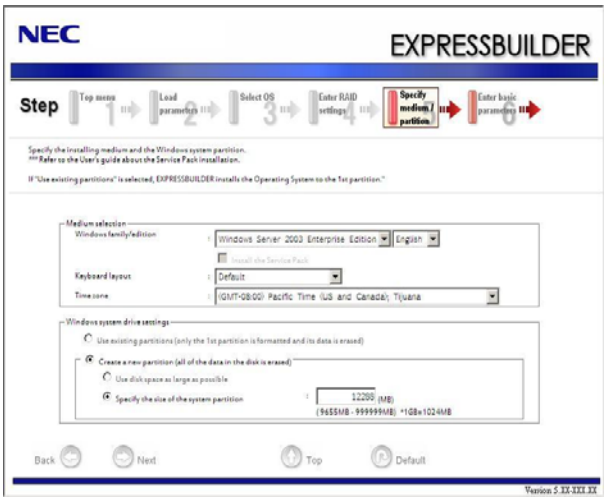
7. Enter the setting of a logical drive.

[Enter RAID settings] steps are displayed. Retain the default value, and click [Next].



8. Specify the installing medium and the Windows system partition.

[Specify medium / Partition] steps are displayed. Confirm the parameters, modify if necessary, and click [Next].



IMPORTANT:

- About partition size

1. Specify the partition size larger than required minimum size for OS installation.
2. Do not specify larger partition size than the capacity of connected hard disk drive.

- If you select “Create a new partition” at “Windows system drive settings,” the contents of the hard disk will be all deleted.
- If “Use existing partitions” is selected, EXPRESSBUJILDER installs the Operating System to the first partition (first partition is deleted). The data in the other partition is kept if the system has two or more partitions (see the figure below).

First Partition Deleted	Second Partition Retained	Third Partition Retained

- You cannot reinstall the system with the existing partition that is upgraded to Dynamic Disk remained. Do not select “Use existing partitions” at “Windows system drive settings.”

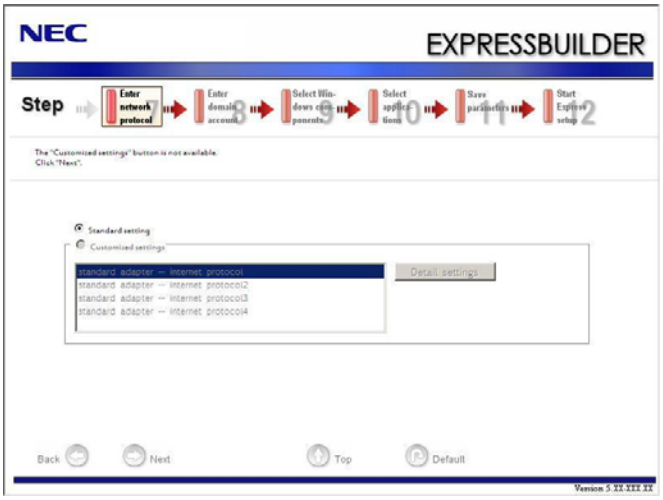
9. Enter the user information and client license mode.

[Enter basic parameters] steps are displayed. Confirm the parameters, modify if necessary, and then click [Next].

NOTE: Even if you do not input value into “Administrator password,” “Confirm password,” “??????” is displayed.

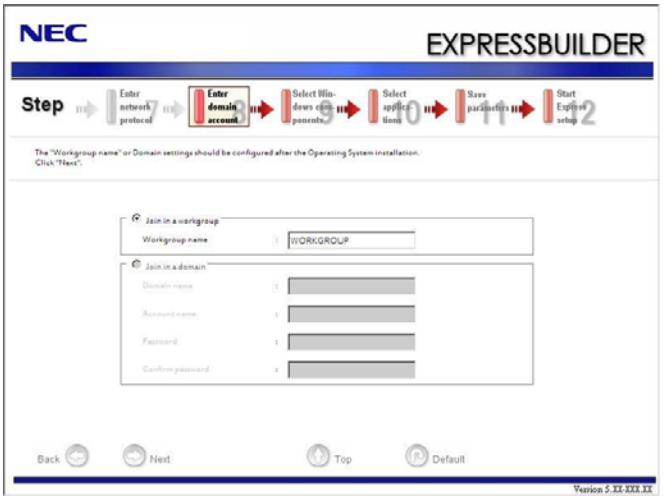
10. Enter the setting of the network protocol.

[Enter Network Protocol] steps are displayed. Retain the default value, and click [Next].



11. Enter the domain or workgroup name to be used.

[Enter domain account] steps are displayed. Retain the default value, and click [Next].

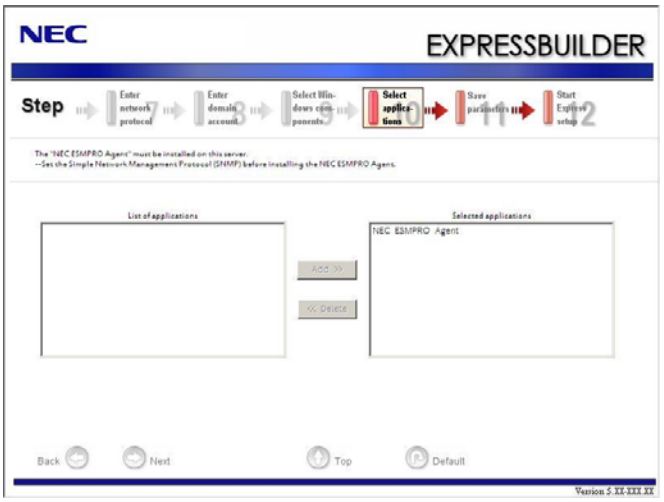


12. Select the installing components.

[Select Windows components] steps are displayed. Retain the default value, and click [Next].

13. Select the installing applications.

[Select applications] steps are displayed. Retain the default value, and click [Next].



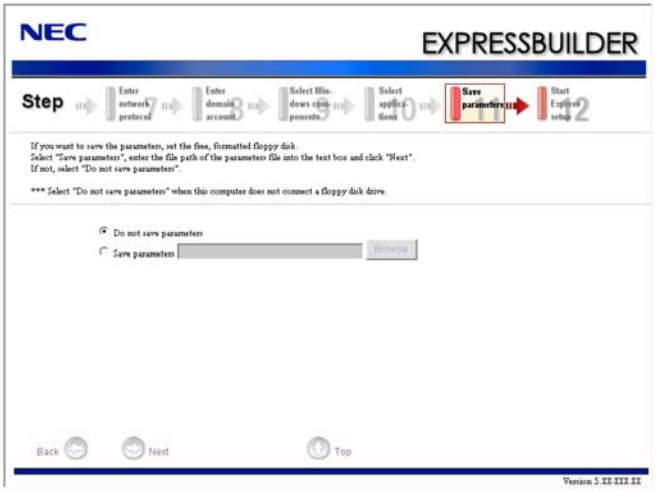
14. Save the parameters.

[Save parameters] steps are displayed.

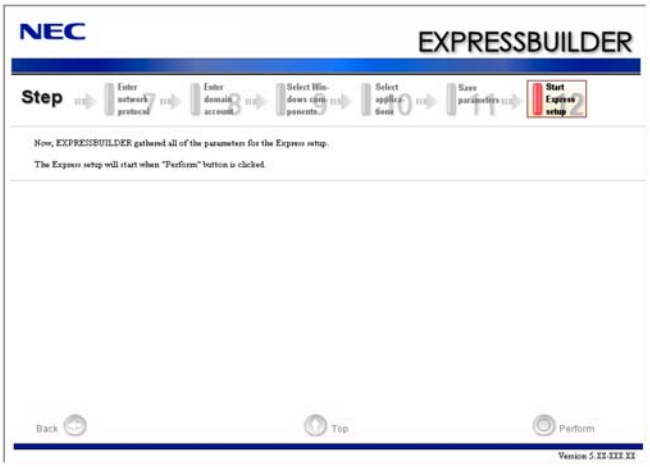
If you want to save the parameters, set free formatted floppy disk.

Select [Save parameters], enter the file path of the parameters files into the textbox and click [Next].

If not, select [Do not save Parameters].


NEC
EXPRESSBUILDER
Step
Enter network protocol
Enter domain account
Select Windows components
Select applications
Save parameters
Start Express setup
If you want to save the parameters, set the free, formatted floppy disk.
Select "Save parameters", enter the file path of the parameters file into the text box and click "Next".
If not, select "Do not save parameters".
*** Select "Do not save parameters" when this computer does not connect a floppy disk drive.
Do not save parameters
Save parameters
Browse
Back
Next
Top
Version 5.XX.XXX.XX

15. The Express Setup will start when you click [Perform] in [Start Express setup] step.



16. Remove NEC EXPRESSBUILDER DVD from the optical disk drive according to the message.

If you proceed the setup y using setup parameter file, remove the floppy disk from the floppy disk drive.

Insert Windows Server 2003 CD-ROM into the optical disk drive.

[Agree Software License Agreement] screen appears.

17. Read the contents carefully and click [Yes] if you do agree. If do not agree, click [No].

NOTES:

- If you do not agree to this agreement, the setup terminates and Windows Server 2003 will not be installed.
- If "NetWare Gateway (and Client) Service" is specified to install, the window to specify the details of "NetWare Gateway (and Client) Service" pops up on the first logon. Specify the appropriate value.

Windows Server 2003 and selected applications will be installed automatically and rebooted several times. After rebooting, it logs on to the system automatically.

18. Insert Microsoft Windows Server 2003 R2 Standard Edition DISK 2 into the optical disk drive after the OS installation.

Hereafter, proceed operations according to the message.

When the installation has finished, remove Microsoft Windows Server 2003 R2 Standard Edition DISC 2 from the optical disk drive, and restart the system.

Now the Setup using Express Setup has completed.

Step 4B: Manual Setup

Follow the procedures below to create “OEM-Disk” before starting the OS install.

Preparing to Install

Windows Server 2003 x64 Editions

You can create a Windows Server2003 x64 Edition OEM-Disk for EXPRESSBUILDER by following two procedures.

Create from EXPRESSBUILDER

Select this procedure when the NEC Express5800 series is the only computer for creating Windows Server2003 x64 Edition OEM-Disk for EXPRESSBUILDER. If Windows Server 2003 x64 Editions operates on the NEC Express5800, you can also select [Create from the menu start by auto-run] described later.

The procedure is as follows:

1. Prepare one 3.5-inch floppy disk.
2. Insert the “NEC EXPRESSBUILDER”DVD into the optical disc drive.
3. Reset (Press <Ctrl> + <Alt> +<Del>) or power off to reboot the Express5800 series. System launches from the DVD-ROM, and NEC EXPRESSBUILDER starts.
4. Select [Create the OEM-Disk for Windows] from the [Step 1, Top menu], then click [Next].
5. Select [Create Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER] from the [Create Windows OEM-Disk], then click [Perform].
6. Follow the instruction on the screen and set the floppy disk into the floppy disk drive. [Windows Server 2003 x64 Editions OEM-Disk for EXPRESSBUILDER] is created.

Protect the disk from overwrite and label as [Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER]. Store this OEM disk in a safe place.

Create from the menu start by auto run

Menu starts automatically by the auto run function when you load the DVD into an optical disc drive that is mounted on a computer running an operating system Windows 2000 + Internet Explorer 6.0, Windows XP, Windows Vista or Windows Server 2003. From this menu, you can create [Windows Server2003 x64 Edition OEM-Disk for EXPRESSBUILDER]. (Including Express the NEC 5800 series)

The procedure is as follows:

1. Prepare one 3.5-inch floppy disk.
2. Start the operating system.
3. Insert the NEC EXPRESSBUILDER DVD into the optical disk drive. The menu launches.
4. Click [Create drive disk (for Windows)], and select [OEM-Disk for Widows Server 2003 x64 Edition].

   NOTE:
   This operation is also possible on the menu that appears by right click.

5. Follow the instruction on the screen and set the floppy disk into the floppy disk drive. [Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER]. Store this OEM disk in a safe place.

Installing Windows

Windows Server 2003 x64 Editions Installation

Follow the procedure below to install.

1. Power on the system.
2. Load the backup CD-ROM DISK 1 or the Windows Server 2003 x64 Edition DISK 1 into the optical disk drive.
3. After loading the backup CD-ROM DISC 1 or the Windows Server 2003 R2 x64 Edition DISC 1 into the optical disc drive, reset (Press <Ctrl> + <Alt> +<Del>), or power off to reboot the NEC Express5800 series.

System launches from the CD-ROM, and NEC EXPRESSBUILDER starts.

IMPORTANT:

When a bootable OS is already installed on the HDD, press <Enter> key while [Press any key to boot from CD…] is appearing on the top of the screen. You do not need to operate this if no bootable OS is installed.
If the Windows Setup screen does not appear after this operation, it means <Enter> key was not pressed properly. Power on to restart the system and start from the beginning.

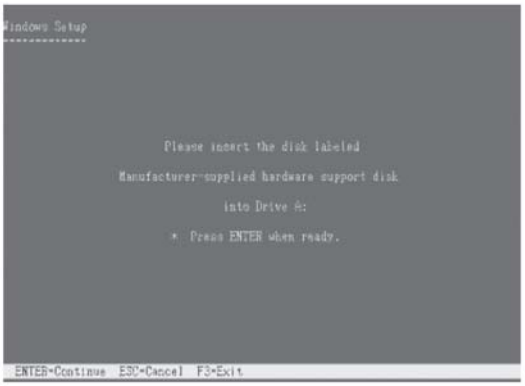
4. Press <F6> key while either of the following messages appears on the screen.
   On the top of the screen: [Setup is inspecting your computer's configuration…]
   On the bottom of the screen: [Press F6 if you need to install a third party SCSI or RAID driver]

   TIPS: After pressing <F6> key, no change appears on the screen.

5. Press <S> key when the right message appears.

Windows Setup
Setup could not determine the type of one or more mass storage devices installed in your system, or you have chosen to manually specify an adapter. Currently, Setup will load support for the following mass storage device(s):
<none>
* To specify additional SCSI adapters, CD-ROM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufacturer, press S.
* If you do not have any device support disks from a mass storage device manufacturer, or do not want to specify additional mass storage devices for use with Windows, press ENTER.
S=Specify Additional Device ENTER=Continue F3=Exit

The right message appears.

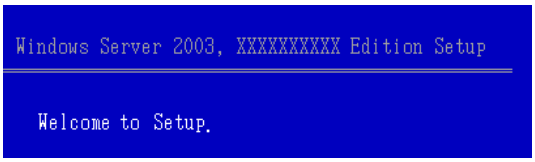


6. Set Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER floppy disk into the floppy disk drive, then press <Enter>.
SCSI adapter list appears.

7. Select [Stratus Virtual Disk Driver], then press <Enter>.
Go back to the step 5 screen and press <Enter>.

8. Select [Stratus Embedded SAS Adapter], then press <Enter>

9. Press <Enter> and start Windows setup when the right message appears.



IMPORTANT:

- On the process of the setup, the request to configure the partition size of Windows Server 2003 x64 Editions installation appears on the screen.

- When you try to install Windows Server 2003 x64 Editions on a disk that has larger partition than 2,097,152MB (2TB), the partition size should be 2,097,152MB and less.

– When there are multiple logical drives, select a partition that you would like to install the OS after the next message appears.

> The following list shows the existing partitions and unpartitioned space on this computer.
> Use the UP and DOWN ARROW keys to select an item in the list.

– You cannot change drive letters for the system volume or the boot volume after completing the setup. Make sure the drive letter is allocated to proper drive on this screen, and then proceed the setup.
After completing the setup, the drive letters may not be the same as before the setup. If you would like to change the drive letters, follow the procedure [How to change drive letters] described later.

TIPS:

After copying the files, the system automatically reboots. You do not have to eject the floppy disk and the CD-ROM. When you do not eject the floppy disk, do not eject the CD-ROM either.
Follow the instructions on the screen to continue the setup. Refer to [Fist Step Guide] for details.

10. After installing Windows Server 2003 x64 Editions, the system automatically reboots.

11. After logging on the system, [Windows Setup] screen appears.

IMPORTANT:

– [Windows Setup] screen may not appear; however, make sure to install Microsoft Windows Server 2003 R2 x64 Editions DISK 2.

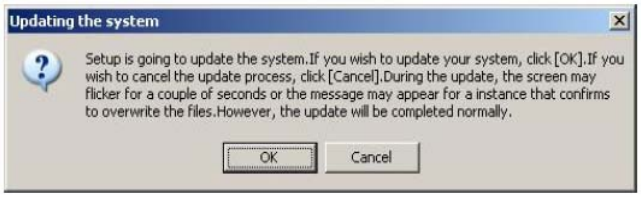
– After applying [Update the system], you can install Microsoft Windows Server 2003 x64 Edition DISK 2. Make sure to install Microsoft Windows Server 2003 R2 x64 Edition. [Windows Setup] screen does not appear this time.

12. Load the Microsoft Windows Server 2003 R2 x64 Edition DISK 2 into the Optical disk drive. Check the setting, then click [OK].

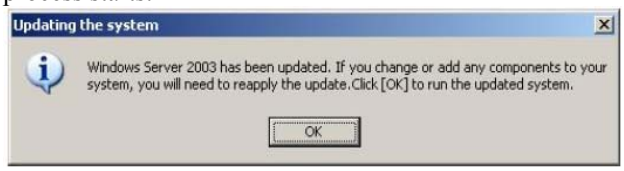
13. After the installation, eject the Microsoft Windows Server 2003 R2 x64 Edition DISK 2 from the Optical disk drive, then reboot the system.

14. Follow the steps below to update the system.
Do not input or output data during the update process.
a) After logging on to the system as a user with the Administrative account, insert NEC EXPRESSBUILDER DVD into the drive of the server.
b) When the “Autorun Munu” screen appears, click [Setup Windows] and click [Update the sysmte] on the menu.

1) When the dialog box for confirmation of executing system update appears, click [OK]. The system update will start. Follow the instructions.


Updating the system
Setup is going to update the system.If you wish to update your system, click [OK].If you wish to cancel the update process, click [Cancel].During the update, the screen may flicker for a couple of seconds or the message may appear for a instance that confirms to overwrite the files.However, the update will be completed normally.
OK
Cancel

2) After the system update is completed, the dialog box below will be displayed. Click [OK]. The system will be rebooted. Eject a DVD from CD/DVD-ROM drive after the reboot process starts.


Updating the system
Windows Server 2003 has been updated. If you change or add any components to your system, you will need to reapply the update.Click [OK] to run the updated system.
OK

IMPORTANT:
When “Found New Hardware” wizard appears at the reboot, click [Cancel]. If the same message appears again, click [Cancel] again.

3) Reboot the system.

15. Install ft Server Control Software

IMPORTANT:
Terminate all programs before starting the installation.
You must terminate all programs because the software will not be installed successfully, especially when Microsoft management console is running.

1. Follow the steps below to install ft Server Control Software.

a) After logging on to the system as a user with the Administrative account, insert the “NEC EXPRESSBUILDER” DVD-ROM into the DVD-ROM drive of the server.

b) The menu screen starts up. Click [Setup software] and select [ft Server Control Software] on the menu.

Follow the instructions to with the installation. The message “ft Server Control Software, Now Installing... Please Wait.” is displayed while ft Server Control Software. Do not use the keyboard or mouse while this message is being displayed.

2. The system is rebooted during the installation.
The system is rebooted several times during the installation. Remove the DVD from the DVD-ROM drive once rebooting is started.
After the system is rebooted, log in again as the user logged in before rebooting.
Installation of the ft Server Control Software is continued.

3. The message “Installation finished.” is displayed.
Once the installation is completed, the message “Installation finished.” is displayed and

the rebooting starts by clicking [OK]. Change this screen to check the message, as the message can hide behind the screen.

For using “ft Server Control Software UPDATE CD-ROM” to update ft Server Control Software:
After installing the ft Server Control Software, follow the procedure on the setup card attached to the “ft Server Control Software UPDATE CD-ROM” and apply the update.

16. For how to install NEC ESMPRO/ServerAgent,
see “NEC ESMPRO Agent”(Page 5-3).

IMPORTANT:
Make sure that “System Update” is applied and that “ft Server Control Software” and “NEC ESMPRO Agent” are installed.

Follow Step5.

Changing Drive Letters

You can change the drive letters with the following procedure:

NOTE:

The following procedure does not change the drive letters for the system volume or the boot volume.

1. Go to the start menu, right click [My Computer], select [Manage] and then launch [Computer Management].
2. Select [Disk Management] in the left window.
3. Select and right-click a volume that you want to change the drive letter, then select [Change Drive Letter and Path for…].
4. Click [Change].
5. Click [Change Drive Letter or Path], then select a letter for the drive.
6. Click [OK].
7. Click [Yes] after confirming the following message.

> Changing the drive letter of a volume might cause programs to no longer run.
> Are you sure you want to change this drive letter?

8. Exit [Computer Management].

Step 5: Windows Server 2003 Service Pack Installation

Installing Windows Server 2003 Service Pack

A Service Pack for Windows Server 2003 x64 Edition and Windows Server 2003 is not applied to the system immediately after Windows install and re-install.

Refer to "Applying Windows Service Pack" on page 5-14, and apply Windows Server 2003 x64 Edition and Windows Server 2003 Service Pack.

IMPORTANT:

The Service Pack 2 for Windows Server 2003 x64 Edition or for Windows Server 2003 must be installed on the NEC Express5800/ft server.

There is no Hot Fix when this User's Guide is issued. Contact your sales representative for the latest Service pack or the Hot Fix.

Step 6: Set Duplex LAN Configuration

The NEC Express5800/ft series builds a duplex LAN configuration by using "Stratus emb-EB 2-Port Gigabit Adapter" mounted as standard on the CPU/IO module and extended PCI slot "NEC MT Gigabit Adapter," "NEC MF Gigabit Adapter," and "Stratus U575 Dual Port Copper Gigabit Adapter."

Overview

The duplex LAN configuration is of three types as described below:

- **Adapter Fault Tolerance (AFT)**

  Adapter Fault Tolerance (AFT) is a feature that places more than one LAN controller on the same LAN (same segment), and automatically switches the process of the primary controller to the backup controller when any trouble occurred on the primary.

- **Adaptive Load Balancing (ALB)**

  Adaptive Load Balancing (ALB) is a feature that connects more than one LAN controller to the same hub and enhances the throughput by operating packet transmission from the server.

  Receive Load Balancing (RLB) is enabled by default. Disable RLB. When RLB is enabled, the network duplex configuration may fail.

- **Switch Fault Tolerance (SFT)**

  Switch Fault Tolerance is a feature that provides the network availability as the failover target (standby) adapter takes over MAC address and L3 address by connecting each two adapters to each two switches when a problem occurs on the adapter, cable or connecting target. One is assigned to the primary adapter and the other is to the standby. The primary adapter

communicates on the network.

Regarding the path redundancy, you need to construct the environment by using the spanning tree not only on the server side but also on the switch side.
You need to set the priority of the switch so that the path through the primary adapter is available even when a switch on the path is broken and the path information is updated.

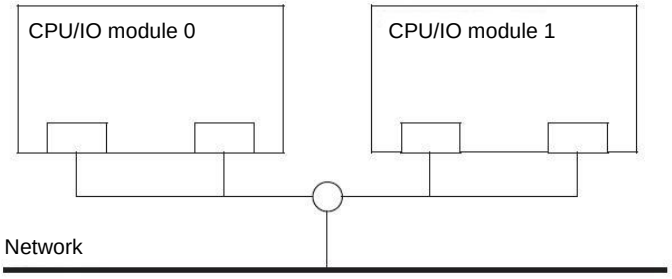
The other modes, “Static Link Aggregation” and “IEEE 802.3ad Link Aggregation” do not contribute to an enhancement of the fault tolerance. When a fault occurs, the communication performed on the controller with the fault will be lost; the backup controller does not take it over.

NEC Express5800/ft Series Duplication Rule

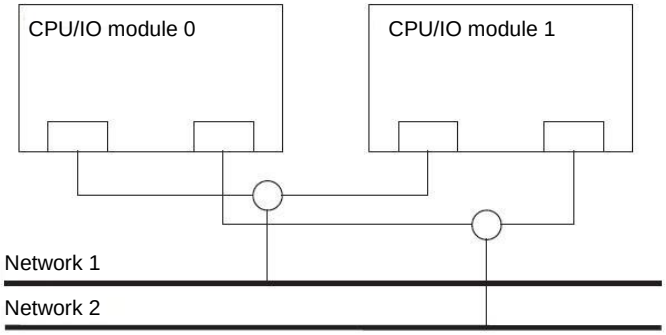
Be sure to set the duplex configuration in the server.

Also, when you set the duplex configuration, be sure to use one CPU/IO module 0 adapter and one CPU/IO module 1 adapter.

e.g.1) Set the duplex configuration with the improved endurance using all the adapters.



e.g.2) Set the duplex configuration for more than one LAN connection



Duplex Configuration Setup

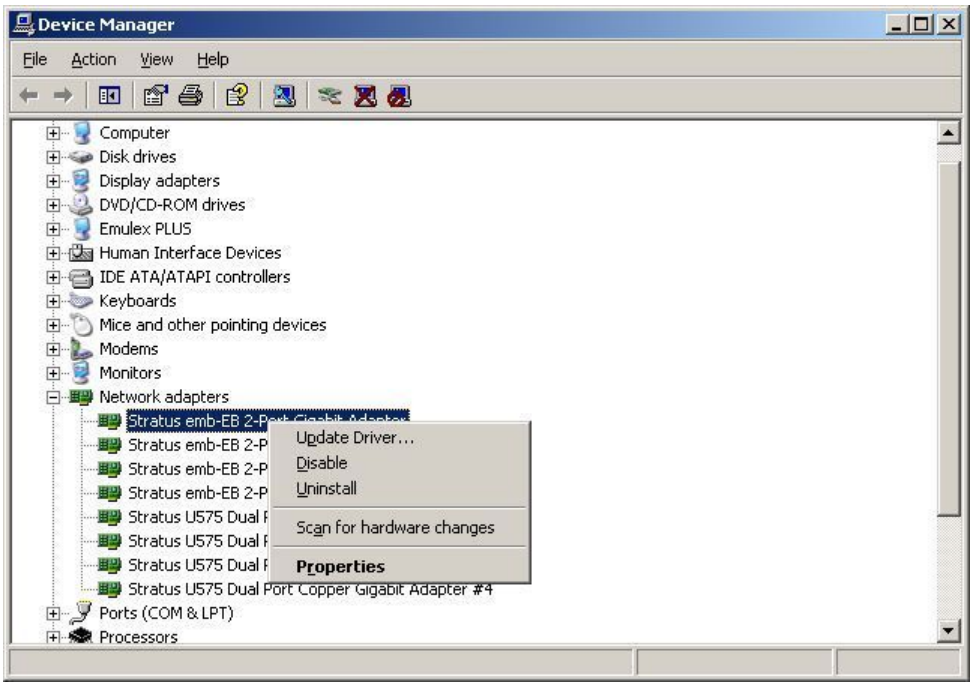
The following describes the procedure to set duplex LAN configuration.

The procedure to set the duplex LAN configuration of the example 1 in “NEC Express5800/ft Series Duplication Rule” above is explained.

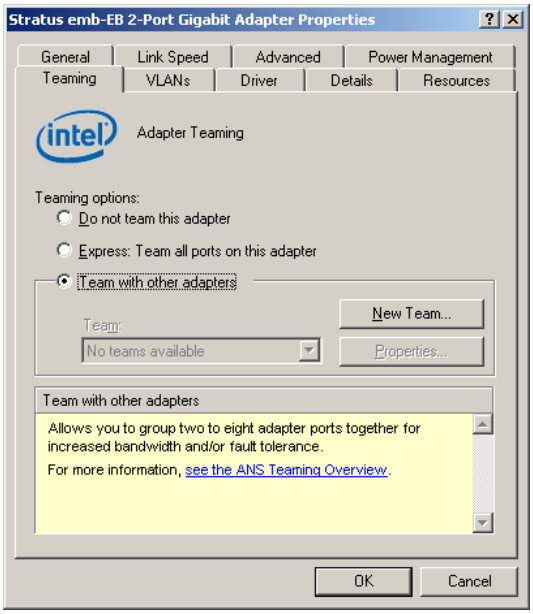
To set the duplex LAN configuration, log on as “Administrator” or a member of the group “Administrators.”

1. Start Device Manager.

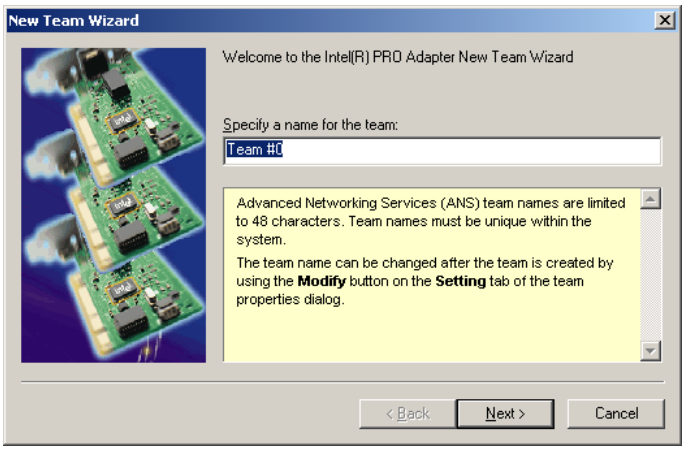
2. Select one target network adapter, right-click on it and select [Properties] from the displayed menu to display the Properties window.



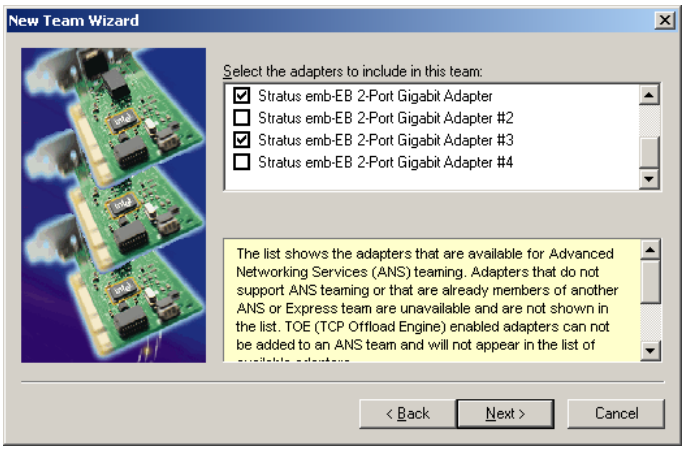
3. Select the [Teaming] tab in the Properties window. Check the radio button of [Team with other adapters] and click [New Team…].



4. Enter the team name, and click [Next >].

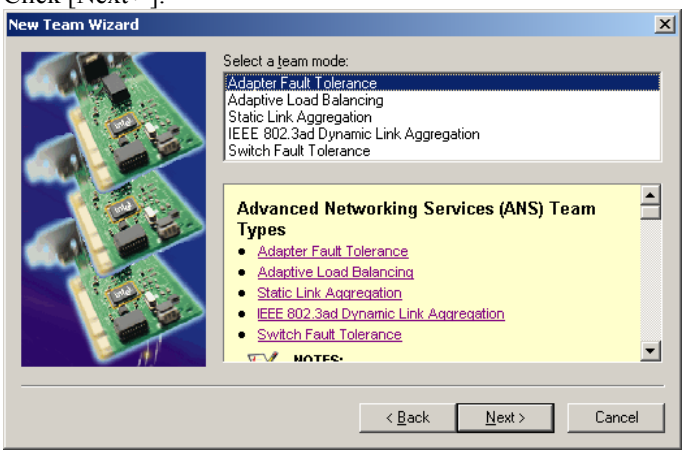

New Team Wizard
Welcome to the Intel(R) PRO Adapter New Team Wizard
Specify a name for the team:
Team #0
Advanced Networking Services (ANS) team names are limited to 48 characters. Team names must be unique within the system.
The team name can be changed after the team is created by using the Modify button on the Setting tab of the team properties dialog.
< Back
Next >
Cancel

5. Select the check boxes of the adapters you want to include to the team, and click [Next>].

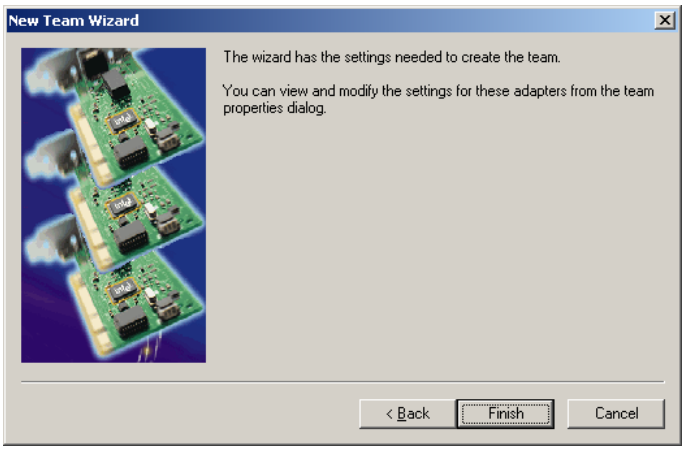

New Team Wizard
Select the adapters to include in this team:
Stratus emb-EB 2-Port Gigabit Adapter
Stratus emb-EB 2-Port Gigabit Adapter #2
Stratus emb-EB 2-Port Gigabit Adapter #3
Stratus emb-EB 2-Port Gigabit Adapter #4
The list shows the adapters that are available for Advanced Networking Services (ANS) teaming. Adapters that do not support ANS teaming or that are already members of another ANS or Express team are unavailable and are not shown in the list. TOE (TCP Offload Engine) enabled adapters can not be added to an ANS team and will not appear in the list of
< Back
Next >
Cancel

6. Select “Adapter Fault Tolerance” or “Adaptive Load Balancing” or “Switch Fault Tolerance” as a team mode. (Usually select “Adapter Fault Tolerance.”)

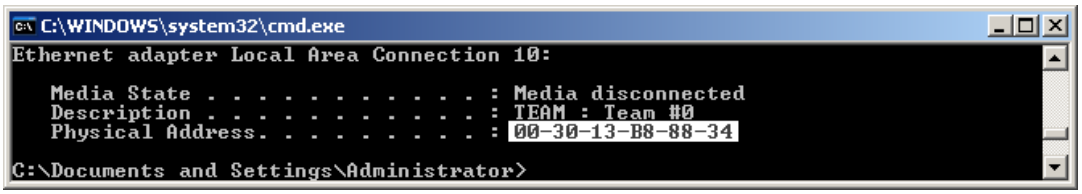
Click [Next >].



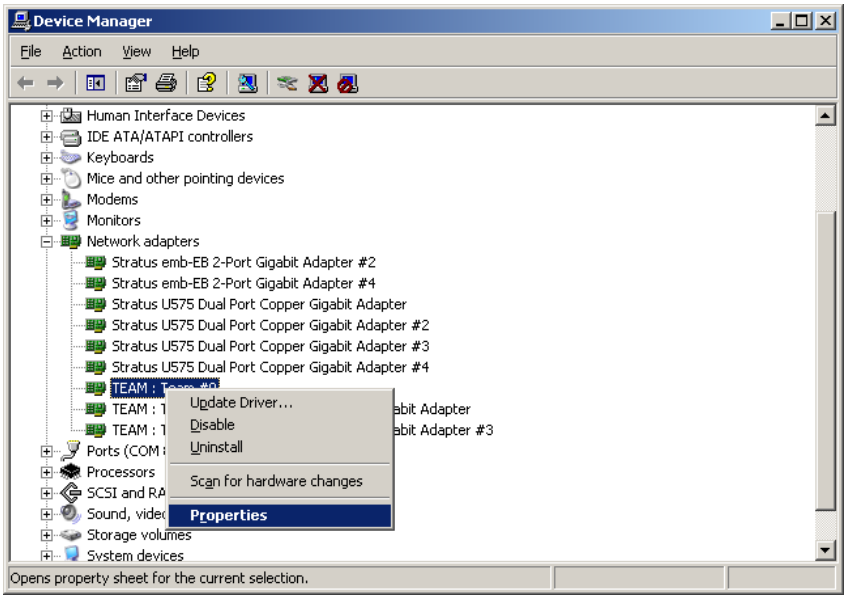
7. Click [Finish].


New Team Wizard
The wizard has the settings needed to create the team.
You can view and modify the settings for these adapters from the team properties dialog.
< Back
Finish
Cancel

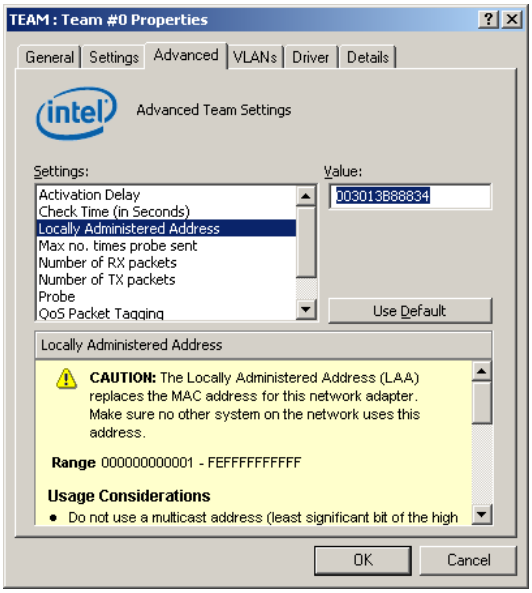
8. Start a command prompt, and confirm the physical MAC address of the team adapter with ipconfig /all.


C:\WINDOWS\system32\cmd.exe
Ethernet adapter Local Area Connection 10:
Media State . . . . . : Media disconnected
Description . . . . . : TEAM : Team #0
Physical Address. . . . . : 00-30-13-B8-88-34
C:\Documents and Settings\Administrator>

9. Select the team adapter that has been set, right-click on it and select [Properties] from the menu displayed to display the Properties window.



10. Select the [Advanced] tab in the Properties window. Select [Locally Administered Address] from the [Settings] list box, and enter the MAC address of team adapter that you have checked in the [Value:] text box, and click [OK].



11. Set the probe setting disabled when a team of two adapters is configured.
Select the [Advanced] tab in the Properties window. Select [Probe] from the [Settings] list box, and click [Disabled] from the [Value:] dropdown list.

Step 7: Set Dual Disk Configuration

NEC Express5800/ft series secures data by setting dual disk configuration using "RDR (Rapid Disk Resync) function." Be sure to make dual disk settings by referring to the procedure.

IMPORTANT:

- Set dual disk configuration by the RDR (Rapid Disk Resync) function. If you want to use other disk management tool (e.g. VERITAS Storage Foundation), install it after "Step 13: Make Settings for Failure Management." If you perform this operation with a tool other than the RDR (Rapid Disk Resync), a mirror synchronization gap may occur when the system is rebooted.

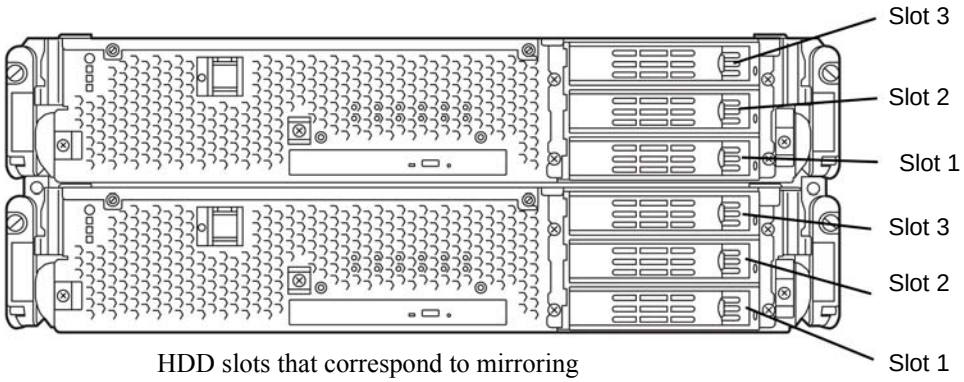
- CPU/IO module has a processor function part and IO function part, and monitors and manages each part. The IO function part is referred to as PCI module in this section.

- HDDs mounted to built-in slots need to be duplexed. Refer to "Setting Dual Disk Configuration by RDR (Rapid Disk Resync) function" and duplex the HDDs in each slot.

Setting Dual Disk Configuration by RDR (Rapid Disk Resync) function

This device sets dual configuration for each disk by the RDR function of the ft server control software.

By setting RDR, as the following figure and table show, dual configuration is set between the disks of the corresponding slots, and these disks are recognized as one virtual disk by Windows (such as Disk Management and Device Manager).



HDD slots that correspond to mirroring

Corresponding slot
PCI module 0 Slot 1 ⇔ PCI module 1 Slot 1
PCI module 0 Slot 2 ⇔ PCI module 1 Slot 2
PCI module 0 Slot 3 ⇔ PCI module 1 Slot 3

* In the table above, PCI module names correspond as follows:
PCI module (for CPU/IO module 0) - PCI module 0
PCI module (for CPU/IO module 1) - PCI module 1

IMPORTANT:

- To perform this procedure, you need to log on as an administrator or a member of administrator group.
- RDR can only be set on the basic disk inserted into the built-in slot of NEC Express5800/ft series. It cannot be set on the dynamic disk.
- For the disk on which RDR is set, use the products with the same serial number.
- Be sure to configure the RDR settings in the same way not only when the OS is installed but also when the disk is added to the PCI module.
- Create partitions only after the duplication of the hard disk drives are configured.

Follow the steps below to configure the dual disk configuration.

IMPORTANT:

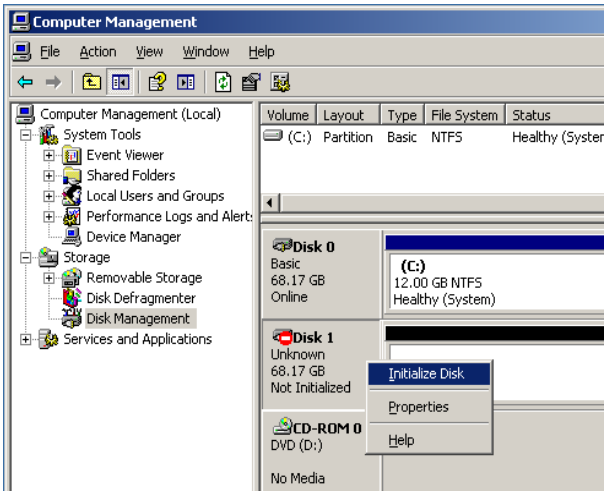
The following describes the dual disk configuration of the slot 1.
If the HDD is mounted to the slot 2 or the slot 3, follow the procedure below to configure the dual disk configuration likewise.

1. Insert a new HDD into an internal HDD slot.

IMPORTANT:

If the HDD is already mounted, this procejure is not required. Proceed to Step 2.

2. Start [Management Tool] by going to [Start] – [Control Panel], and select [Disk management on the left tree. If the disk you want to duplex is shown as "Not Initilized," right click on the disk to initialize.



TIPS:

A popup window is displayed when you inserted or initialized the disk; however, you do not need to restart the system. Select [No] to exit the popup window.

3. Start RDR Utility by goint to [Start] -
[All Programs] -[RDR] -
[RDR Utility].

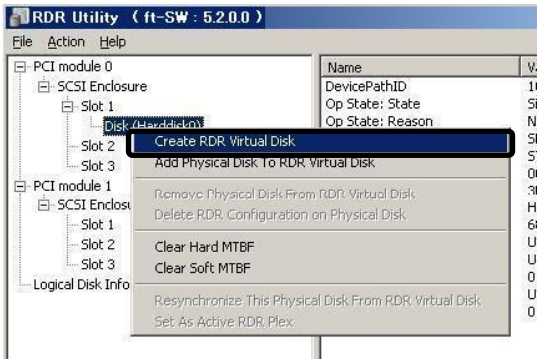
IMPORTANT:

If the [Disk Condition] of the OS-installed disk(the slot 1 of the PCI module 0) says "Boot/Configured/Active/Imported," you do not need to take the procedure 4 to 6. Proceed to the procedure 7.
If the [Disk Condition] is other than "Boot/Configured/Active/Imported," proceed to the procedure 4. To view [Disk Condition], go to the left pane of the RDR Utility, click the OS-installed disk, and see the display on the right pane.

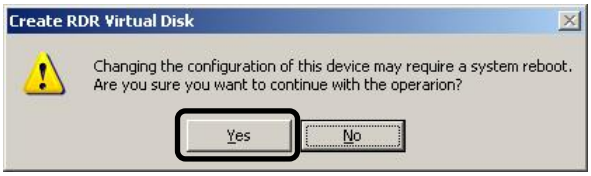
4. Right-click the disk (Slot 1 of PCI module 0) on which the system is installed on the left pane of the [RDR Utility] window, and click [Create RDR Virtual Disk].

TIPS:

Depending on the disk status, it takes time to set RDR, and RDR Utility may be stopped for a few minutes. This is not an error. Just wait for a while.



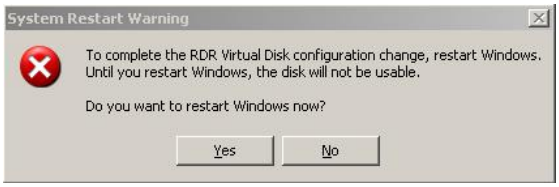
5. Click [Yes].


Create RDR Virtual Disk
Changing the configuration of this device may require a system reboot.
Are you sure you want to continue with the operarion?
Yes
No

6. Click [OK].

IMPORTANT:

If you set RDR on the disk that includes a system partition or a partition that cannot be unmounted, the message on the right is displayed. Click [Yes]. The system is restarted after 2 minutes. After it is restarted, perform the steps 7and later.


System Restart Warning
To complete the RDR Virtual Disk configuration change, restart Windows. Until you restart Windows, the disk will not be usable.
Do you want to restart Windows now?
Yes
No

System Shutdown
This system is shutting down. Please save all work in progress and log off. Any unsaved changes will be lost. This shutdown was initiated by NT AUTHORITY\SYSTEM
Time before shutdown : 00:01:06
Message
This system will reboot in 2 minutes to complete the RDR Virtual Disk configuration change.
This action CANNOT be cancelled!
No further warning will be given.

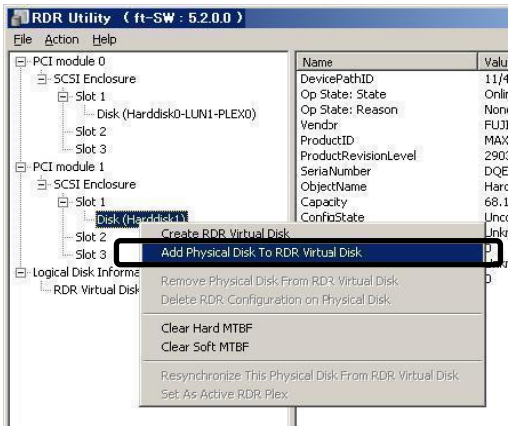
7. Insert the disk to set dual configuration into the slot 1 of PCI module 1, and execute the procedure 2.

IMPORTANT:

- If a HDD is already mounted, this procedure is not necessary. Proceed to the procedure 8.
- A popup window may come up when you inserted or initialized the disk; however, you do not need to restart the system. Select [No] to exit the popup window.
- As to the disk to be inserted, use a new disk or a physically formatted disk with the same capacity as the synchronization source disk. If you use other disks, dual configuration is not set normally.

* As for physical format, refer to "SAS BIOS – Adaptec SAS/SATA – Configuration Utility" in Chapter 4, "System Configuration" in the separate volume of the User's Guide, and perform Format Disk with Disk Utilities
To perform "Low-Level Format," on the BIOS setup utility, click [Server], [Monitoring Configuration] and set [Option ROM Scan Monitoring] to [Disabled]. For how to configure the settings, see "System BIOS – SETUP –" in Chapter 4, "System Configuration" in the separate volume of the User's Guide.

8. Right-click the Slot 1 of the PCI module 1 from the left pane of RDR Utility, and then click [Add Physical Disk To RDR Virtual Disk].

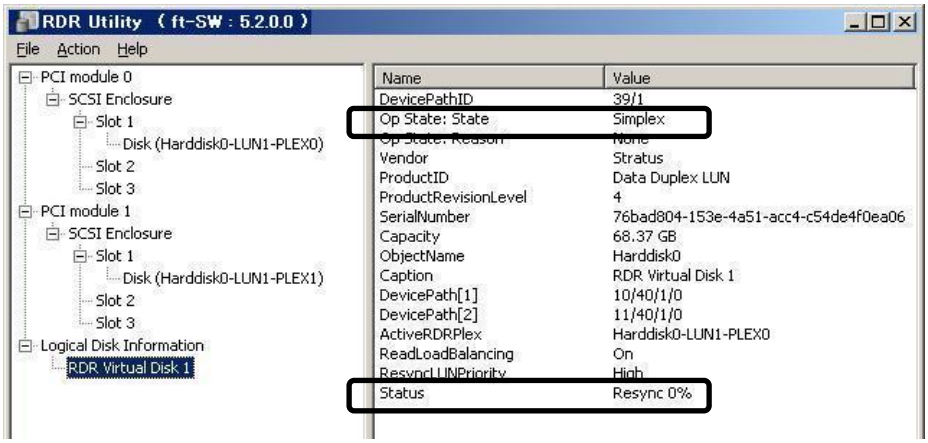


9. Click [OK].

10. Check that disk synchronization has been started and the status of the DISK ACCESS LED and RDR Utility display changes as the following table.

■ During synchronization

	DISK ACCESS LED	RDR Utility	
		Condition	Status
Synchronization source disk	Amber and blinking	Simplex	
Synchronization destination disk	Amber and blinking	Syncing	
RDR Virtual Disk		Simplex	Resync x % (x=0, 4, 8,…, 96)



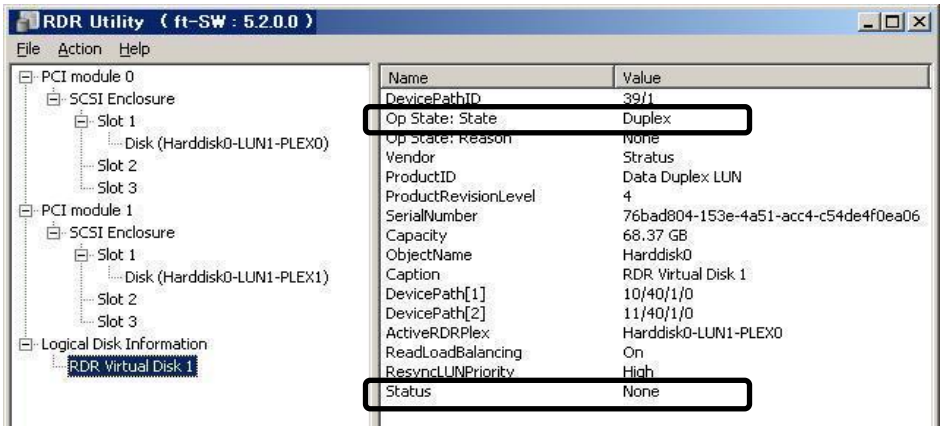
IMPORTANT:

– The time required for synchronization deffers depending on the size of the partition that exists on the disk. As for the partition with the 18GB capacity, it takes about 20 minutes. If there is no partition, synchronization completes soon after setting RDR is completed and the disk changes to the synchronization completion status.

– Setting dual disk configuration may not complete if the system is rebooted during synchronization. Do not reboot the system before synchronization process completes.

■ Synchronization completed

	DISK ACCESS LED	RDR Utility	
		Condition	Status
Synchronization source disk	Green and blinking	Duplex	
Synchronization destination disk	Green and blinking	Duplex	
RDR Virtual Disk		Duplex	None



IMPORTANT:

- If you have created a new partition on the disk where RDR has been set and which is duplexed, the created partition area is automatically synchronized.
- If the system is not stopped without terminating Windows normally (such as by pressing the power button), the whole disk area synchronized will be resynchronized after the system is rebooted.

Step 8: Update Software

If you use ftServer Control Software UPDATE CD-ROM, see “Installing ftServer Control Software” (page 6-12) to update the software. When there are other update modules, apply them in this step.

Step 9: Connect and Configure Options

When there are optional PCI boards or peripheral devices to connect to the main unit, power off the main unit. Then, for connecting them, follow the instructions in “PCI board” in the separate volume of the User’s Guide and the manual of the devices.

Make dual configuration when you added LAN and disks. For details, see “Step 6 Set Duplex LAN Configuration” on page 4-8 and “Step 7 Set Dual Disk Configuration” on page 4-8.

Step 10: Create Volume

For NEC Express5800/ft series, you need to perform mirroring for each disk by the RDR function. If you created a new partition or volume on the disk that has been set RDR and dual configuration, the area is mirrored automatically. You do not need to perform mirroring for each partition or volume. For more details about performing mirroring by the RDR function, see "Setting Dual Disk Configuration by RDR (Rapid Disk Resync) function" in "Step 7: Set Duplex Disk Configuration."

IMPORTANT:

Do not create any partition/volume on the OS HDD other than the one for the system.

TIPS:

- To create a partition or volume, refer to the Windows online help.
- You can create a partition or volume even after the operation has been started.

Step 11: Set Network for NEC ESMPRO Agent

NEC ESMPRO Agent is required for continuous operation of the NEC Express5800/ft series. It is automatically installed when you reinstall Windows 2003.

To operate NEC ESMPRO Agent, you need to set the SNMP.

To change the settings of the SNMP Service:

1. Double-click [Administrative Tools] in [Control Panel].
2. Open [Services] in [Administrative Tools].
3. Select [SNMP Service] from the service list and then [Properties] in the [Action] menu.

   The "SNMP Properties" dialog box appears.
4. Enter "public" in the [Community name] box in the [Traps] property sheet and click the [Add to list] button.

   IMPORTANT:

   - If you changed the community name of traps to be received from the default "*" in the NEC ESMPRO Manager site, enter the same name as the community name newly set in the NEC ESMPRO Manager site.
   - To receive trap from NEC ESMPRO Agent at the NEC ESMPRO Manager machine, both community names should be the same.

5. Click the [Add...] button in [Trap destinations]. After entering the IP address of the NEC ESMPRO Manager machine of the send destination in the [Host name, IP or IPX address] box, click the [Add] button.

   IMPORTANT: If the IP address (or host name) of the remote NEC ESMPRO Manager is specified as the trap send destination in the setup of the manager report (TCP/IP), the message warning the duplication appears. The specification of the same NEC ESMPRO Manager causes to be reported doubly.
6. Open the [Security] property sheet and make settings as follows:

   - Add the community name entered in 4 to [Accepted community names].
   - Set its authority to [READ CREATE] or [READ WRITE].
   - Select [Accept SNMP packets from any host].

   IMPORTANT:

   - If you entered any community name other than "public" in 4, add that name to "Accepted Community Names."
   - Unless you set the acceptable community's authority to "READ CREATE" or "READ WRITE," you cannot perform monitoring from NEC ESMPRO Manager.

   Setup of receiving SNMP packets from specific hosts only

   Select [Accept SNMP packets from these hosts], specify IP addresses of the hosts, IP addresses of the servers to install Agent, and the loop-back address (127.0.0.1).

Setup of receiving SNMP packets from specific communities only

Change the name of the community receiving SNMP packets from the default “public” to any name.

IMPORTANT:

- If the community name is changed, you must change the registered community of NEC ESMPRO Agent from [Control Panel]. To change the community to another and register it, use the [SNMP Community] list box in the [General] tab.
- To allow NEC ESMPRO Agent to receive SNMP packets sent from NEC ESMPRO Manager, set the send community name in NEC ESMPRO Manager to be the same as that accepted by the SNMP Service in NEC ESMPRO Agent.

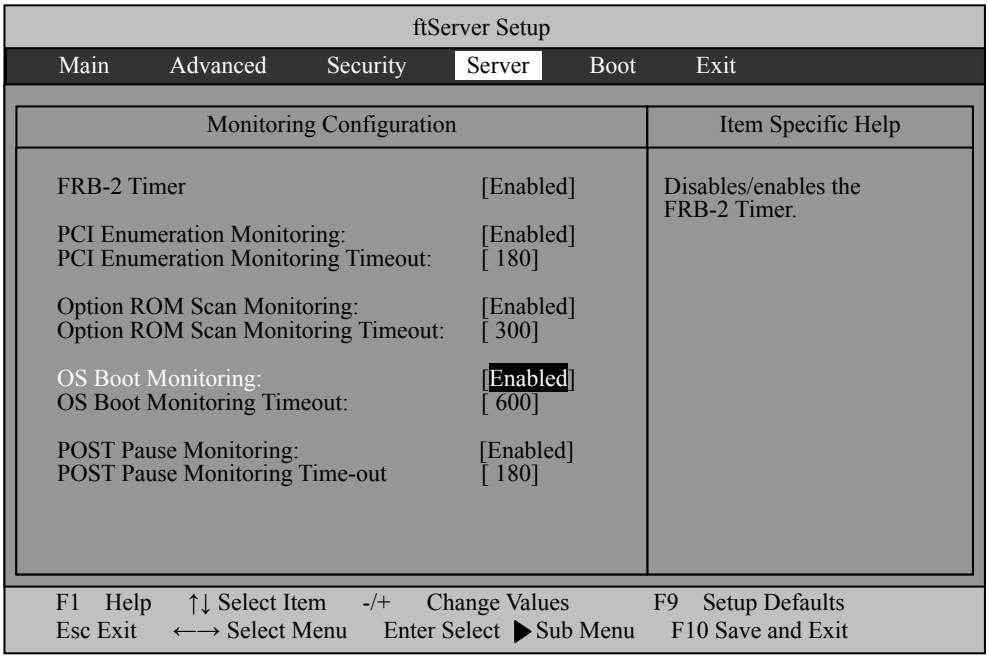
7. Terminate the network setup.

IMPORTANT:

- If the SNMP service is added to the system after the service pack had been applied at OS installation, apply it again. If not, the SNMP service may not operate properly. This can cause the improper operation of NEC ESMPRO Agent.
- The SNMP Service is required for operating NEC ESMPRO Agent. If the SNMP Service is deleted after the installation of NEC ESMPRO Agent, install the SNMP Service and then reinstall NEC ESMPRO Agent.
- Some software products provided by other vendors use the SNMP Service. If the SNMP Service and NEC ESMPRO Agent are installed in the system in which such software as above is installed, it may be impossible to start NEC ESMPRO Agent services. If so, delete the SNMP Service once and install the service again. Then, reinstall NEC ESMPRO Agent and the other vendor's software.

Step 12: Enable OS Boot Monitoring Function

Enable the “OS Boot Monitoring” setting which has been switched at “OS Boot Monitoring” (page 4-8). Refer to “Step 3: Disable OS Boot Monitoring Function“ (page 4-8), change to “Enabled,” and set appropriate time (default is 10 min.).



Step 13: Make Settings for Failure Management

Make the following settings beforehand to ensure quick recovery from failure.

You will see the procedure for Windows Server 2003 here; however, you can take the same procedure for Windows Server x64 Editions as well.

Set Memory Dump (Debug Information)

This section explains the setting for collecting memory dump (debug information) in the server.

IMPORTANT: Notes on memory dump

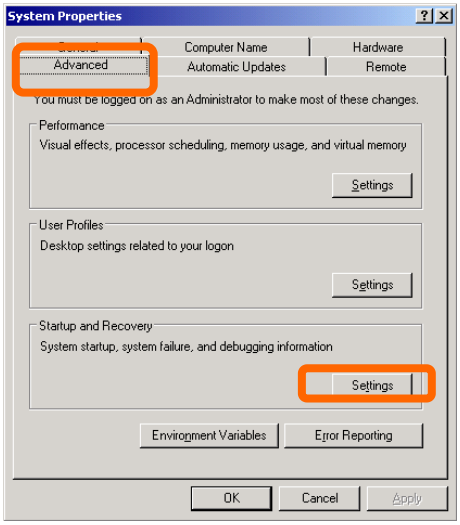
- The maintenance personnel designated by your sales agent are responsible for collecting memory dump. Customers should make settings of memory dump only.
- Sometimes a message indicating a shortage of virtual memory appears at the system startup, when a failure has occurred after making settings described here and you have restarted the system to save the memory dump. Continue the startup. If you restart the system, you may not be able to collect the memory dump accurately.
- If an error such as a stop error of the OS occurs, the normal dump function may run instead of the quick dump function depending on the system status. However, the memory dump file can be used for failure analysis equivalent to that of the quick dump function.

Take the following steps to set memory dump:

1. From the [Start] menu, select [Control Panel] and then click [System].

   The [System Properties] dialog box appears.

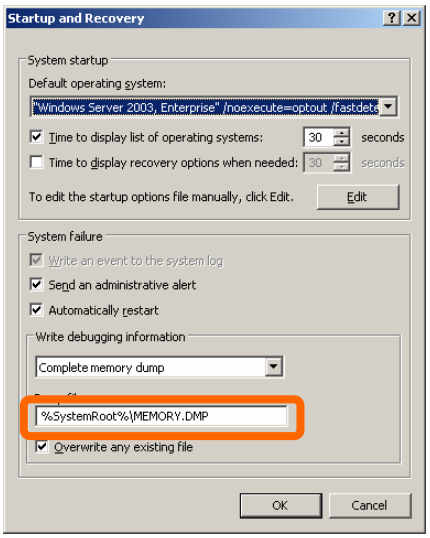
2. Click the [Advanced] tab.
3. Click [Settings] in the [Startup and Recovery] box.



4. Enter the location, where debug information is to be written, in the text box.

When writing debug information under the file name “MEMORY.DMP” in the D drive:

D:\MEMORY.DMP



IMPORTANT:

For Windows Server 2003 x64 Editions

- [Automatically restart] must be checked for the system error settings. If you uncheck [Automatically restart], debug info (memory dump) may not be saved.
- [Complete memory dump] should be specified for writing debug information. However, if the mounted memory size is over 2GB, specify [Kernel memory dump]; you cannot specify [Complete memory dump], as [Complete memory dump is not displayed on the drop down menu.
- Specify a disk drive that has a free space of the memory size on the NEC Express5800/ft series +1MB or more.
- If the memory is expanded to larger than 2GB, change Write Debugging Information to [Kernel memory dump] before expanding the memory. Size of the debugging information (memory dump) to be collected changes due to memory the memory increase. Verify how much free space on the hard disk that debugging information is to be written.

For Windows Server 2003

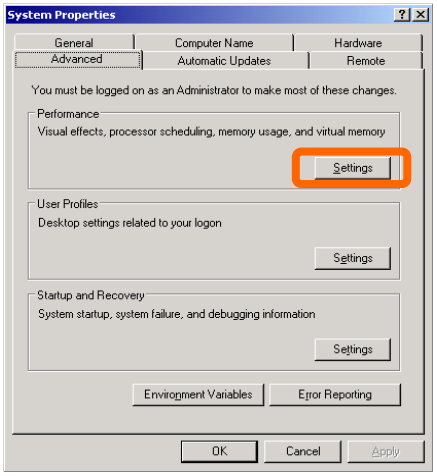
- [Complete memory dump] should be specified for writing debug information. However, if the mounted memory size is over 2GB, specify [Kernel Memory Dump]; you cannot specify [Complete memory dump], as [Complete memory dump] is not displayed on the drop down menu.
- Specify a drive that has a free space of the memory size on the NEC Express5800/ft series + 12MB or more (If the memory size is over 2GB, 2048MB

+ 12MB).

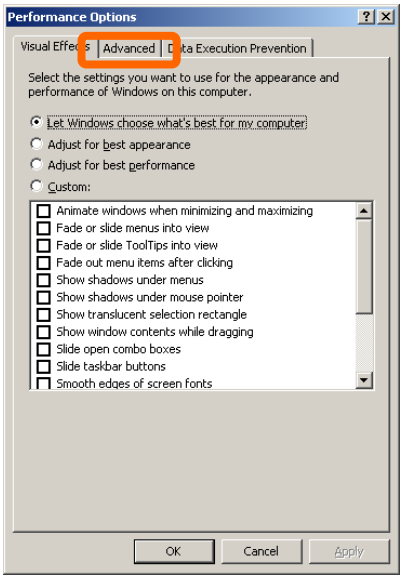
- If the memory is expanded to larger than 2GB, change Write Debugging Information to [Kernel memory dump] before expanding the memory. Size of the debugging information (memory dump) to be collected changes due to the memory increase. Verify how much free space on the hard disk that debugging information is to be written.
- If an error such as a stop error of the OS occurs, the normal dump function may run instead of the quick dump function depending on the system status. However, the memory dump file can be used for failure analysis equivalent to that of the quick dump function
- In the system failure settings, specify “Automatically restart.” When this option is unchecked, memory dump (debug information) may not be saved.

5. Click [Settings] in the [Performance] box.

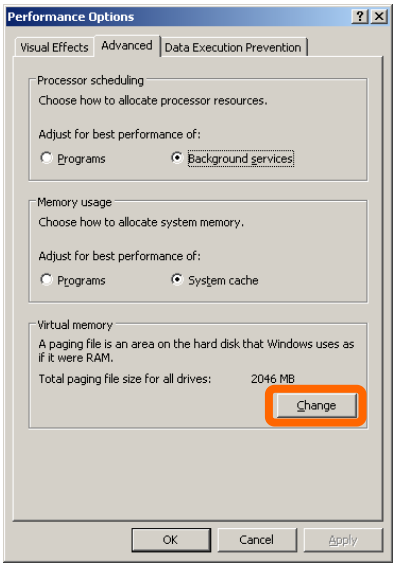
The [Performance Options] window appears.



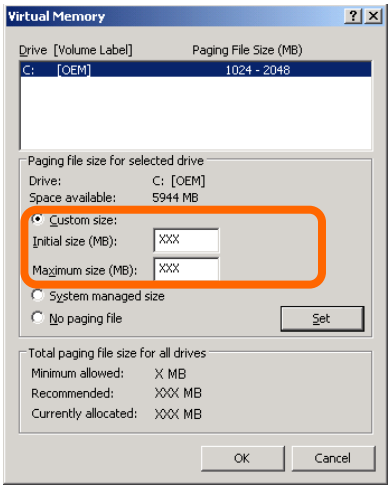
6. Click the [Advanced] tab on the [Performance Options] window.


Performance Options
Visual Effects
Advanced
Data Execution Prevention
Select the settings you want to use for the appearance and performance of Windows on this computer.
Let Windows choose what's best for my computer
Adjust for best appearance
Adjust for best performance
Custom:
Animate windows when minimizing and maximizing
Fade or slide menus into view
Fade or slide ToolTips into view
Fade out menu items after clicking
Show shadows under menus
Show shadows under mouse pointer
Show translucent selection rectangle
Show window contents while dragging
Slide open combo boxes
Slide taskbar buttons
Smooth edges of screen fonts
OK
Cancel
Apply

7. Click [Change] in the [Virtual memory] box.



8. Change the value set for [Initial Size] in the [Paging file size for selected drive] box to the [Recommended] value or more, and then click [Set].



IMPORTANT:

- Be sure to create the file in the size more than [Recommended] value in the OS partition. If a value smaller than the [Recommended] value is set for [Initial Size] of the paging file, accurate debug information (memory dump) may not be collected.
- For the [Recommended] value, see “

Size of the Partition to be Created“ (page 4-6).

- To be prepared for failure, it is recommended to press the dump button to see if the memory dump can be collected normally beforehand.
- If the memory has been expanded, re-set the paging file according to the memory size.

9. Click [OK].

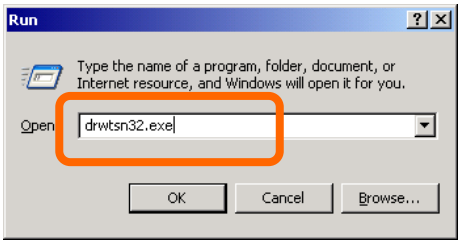
A message is displayed asking you to restart the system depending on the changed settings. Restart the system according to the messages.

Set Dr. Watson

Dr. Watson of Windows Server 2003 is a debugger for application errors. When detecting an application error, Dr. Watson diagnoses the NEC Express5800/ft series, and records the diagnostic information (log). Take the following steps to collect diagnostic information:

1. Click [Run...] from [Start].
2. Enter "drwtsn32.exe" in the [Open] box, and click [OK].

   The [Dr. Watson for Windows] dialog box appears.



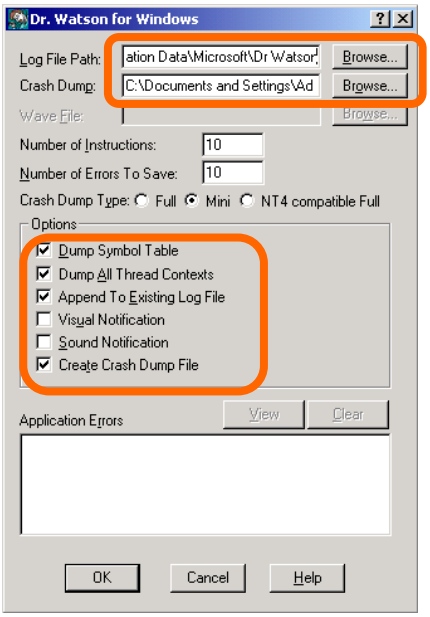
3. Specify where you want to save diagnostic information in the [Log File Path] box.

   Diagnostic information is saved under the file name "DRWTSN32.LOG."

   CHECK: Do not specify a network path. Be sure to specify a path on the local computer.

4. Specify the crash dump file save destination in the [Crash Dump] box.

   TIPS: A "crash dump file" is a binary file that can be read by Windows Debugger.



5. Select the following check boxes in the [Options] box.

   ☐ [Dump Symbol Table]
   ☐ [Dump All Thread Contexts]
   ☐ [Append To Existing Log File]
   ☐ [Create Crash Dump File]
   For the above functions, see the online help.

6. Click [OK].

Install a Network Monitor

A network monitor is useful for examining the causes of network failures and taking the countermeasures. To use the network monitor, you need to restart the system after the installation. It is recommended to install the network monitor before a failure occurs.

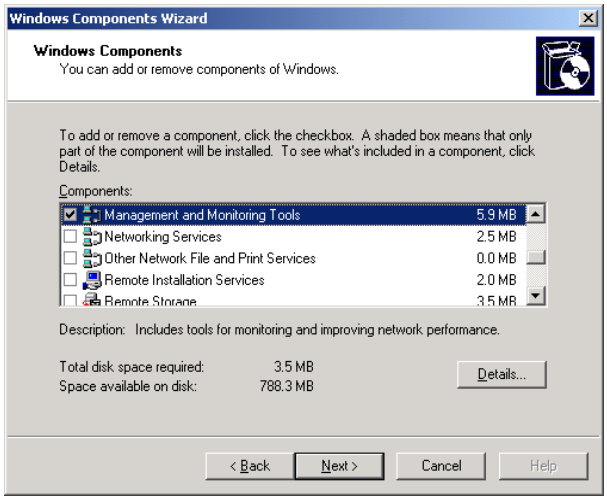
1. From the [Start] menu, select [Control Panel] and click [Add/Remove Windows Programs].

   The [Add/Remove Windows Programs] dialog box appears.

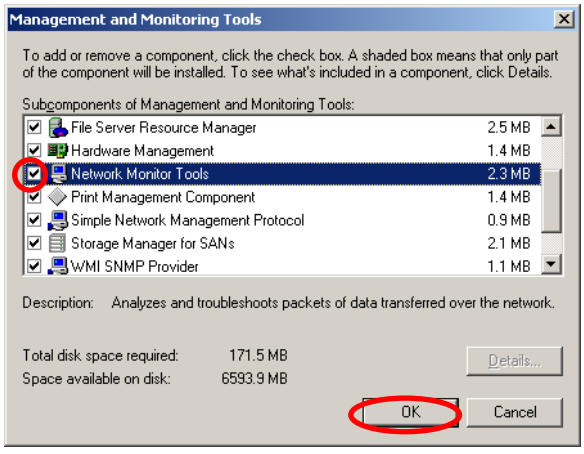
2. Click [Add/Remove Windows Components].

   The [Windows Components Wizard] dialog box appears.

3. Select the [Management and Monitoring Tools] on [Components] and click [Details…] at the bottom right of the window. [Management and Monitoring Tools] appears.


Windows Components Wizard
Windows Components
You can add or remove components of Windows.
To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Components:
Management and Monitoring Tools 5.9 MB
Networking Services 2.5 MB
Other Network File and Print Services 0.0 MB
Remote Installation Services 2.0 MB
Remote Storage 3.5 MB
Description: Includes tools for monitoring and improving network performance.
Total disk space required: 3.5 MB
Space available on disk: 788.3 MB
Details...
< Back
Next >
Cancel
Help

4. Check the [Network Monitor Tools] check box on the [Subcomponents of Management Monitoring Tools] dialog box and click [OK] at the bottom of the window.


Management and Monitoring Tools
To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Subcomponents of Management and Monitoring Tools:
File Server Resource Manager 2.5 MB
Hardware Management 1.4 MB
Network Monitor Tools 2.3 MB
Print Management Component 1.4 MB
Simple Network Management Protocol 0.9 MB
Storage Manager for SANs 2.1 MB
WMI SNMP Provider 1.1 MB
Description: Analyzes and troubleshoots packets of data transferred over the network.
Total disk space required: 171.5 MB
Space available on disk: 6593.9 MB
Details...
OK
Cancel

5. Click [Next].

6. If a message is displayed asking you to insert "Windows Server 2003 R2A Enterprise Edition CD-ROM," follow the instructions on the screen.

   Close the menu that appears by inserting the CD-ROM. To close the menu, click the [X] mark on the menu.

7. Click [Finish] in the [Windows Components Wizard] dialog box.

8. Click the [X] mark on the [Add or Remove Programs] dialog box.

You can also activate the network monitor by clicking [Start], pointing to [All Programs], pointing to [Administrative Tools] and then clicking [Network Monitor]. For details on the operation, see the online help.

Set Recovery Console

TIPS:

Recovery console is used for repairing the system when the system cannot be started for some reason.

There are cautions to be taken for using the Recovery console. Refer to "Cautions for using the Windows Server 2003 Recovery Console" of "SYSTEM REPAIR" in Chapter 6 "Troubleshooting" in the User's Guide (Setup).

Step 15: Back up System Information

The system information includes the current BIOS settings and any specific information for the server. Save the information after completing the system setup. Without the backup data, you will not be able to recover the information.

You can save the information by the following process:

1. Insert the “NEC EXPRESSBUILDER” DVD into the optical disk drive of the server, and restart the system.
2. Select [Tool menu].
3. Select [English].
4. Select [Maintenance Utility].
5. Select [System Information Management].
6. Insert a 3.5-inch floppy disk into the floppy disk drive.
7. Select [Save].

The setup is now completed.

Chapter 5

Procedures after Completion of Installation

This chapter describes how you install management utilities, how you back up system information, and setup of PCs on the network. You may need to confirm these procedures while the system is running.

INSTALLING MANAGEMENT UTILITIES

The provided “NEC EXPRESSBUILDER” DVD contains “NEC ESMPRO Agent” for monitoring NEC Express5800/ft series and “NEC ESMPRO Manager” for managing the NEC Express5800/ft series. Install and setup these utilities in the NEC Express5800/ft series or the computer (management PC) that manages the NEC Express5800/ft series.

Updating the System

Perform system update in the following cases:

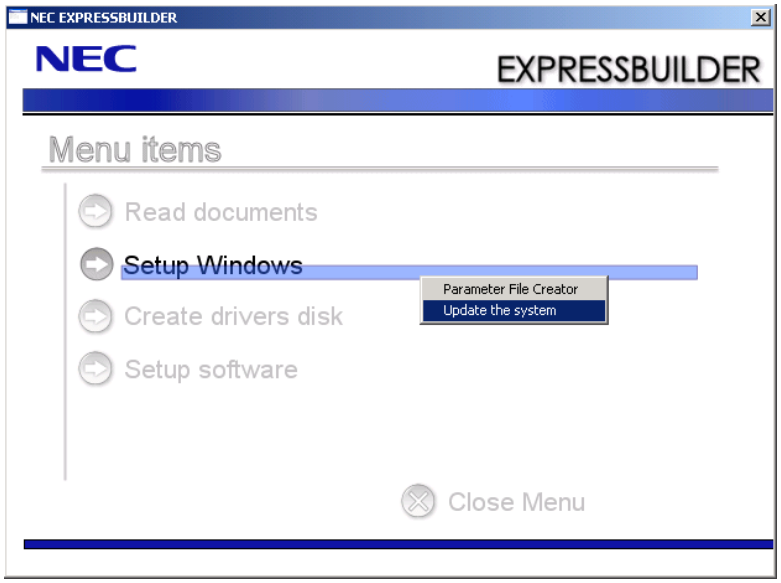
- When the system configuration is changed
- When the system is restored
- When the system is restored from the backup tool

TIPS:

Use the Windows Server 2003 CD-ROM that includes ServicePack1 to install this server (320Fd-MR).

Log on to the system with the account that has administrator rights (such as Administrator) and insert the “NEC EXPRESSBUILDER” DVD into the DVD-ROM drive.

The menu screen is displayed. Click [Setup Windows] and click [Update the System] from the menu to start the system update. Follow the messages displayed on the screen to continue the process.



NEC ESMPRO Agent

NEC ESMPRO Agent is automatically installed by executing the “Fault Tolerant Server series setup program.”

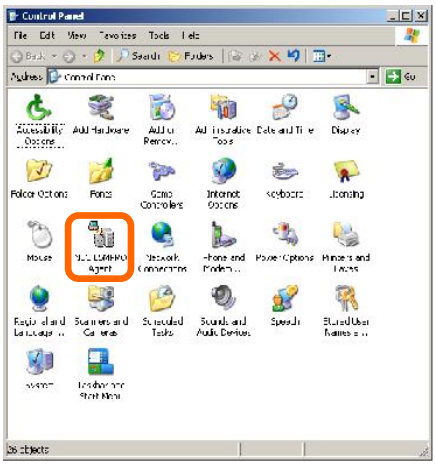
Click [Start] then [All Programs], and make sure that the installed utility folder exists. If it has not been installed while setting up the Fault Tolerant Server series, install it separately.

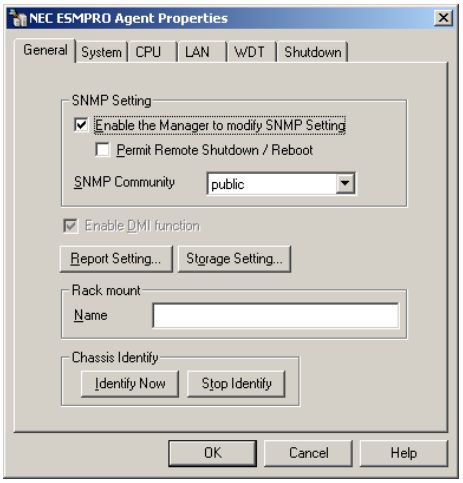
IMPORTANT:

Make sure that NEC ESMPRO Agent is installed because it is indispensable for continuous operation of NEC Express5800/ft series.

To set details about NEC ESMPRO Agent, double-click the [NEC ESMPRO Agent] icon in the [Control Panel] dialog box. The properties dialog box appears for changing the settings.

For details on the set items, see the online help displayed by clicking on [Help].





Operation Environment

NEC ESMPRO Agent can be operated in the hardware and software environments shown below.

- **Hardware**
  - Installation system NEC Express5800/ft series
  - Memory Memory capacity required to operate OS + 25.0 MB or larger
  - Empty capacity of hard disk 50.0 MB or larger
- **Software** Windows Server 2003 SP1

Preparation before Setup

Be sure to read the following description before system installation or setup.

To operate NEC ESMPRO Agent, you need to make settings of TCP/IP and the SNMP of components associated with TCP/IP.

TCP/IP Setting

See the Help started from the Start menu for how to set TCP/IP.

SNMP Service Setting

To install the SNMP Service:

1. Open [Add/Remove Programs] in [Control Panel].
2. Click [Add/Remove Windows Components].
3. Select [Management and Monitoring Tools] in the Windows component wizard and click the [Details...] button.
4. Check the check box of [Simple Network Management Protocol].
5. Click the [Next] button.

   The file copy operation is started.
6. After the file copy is finished, click the [Finish] button.

To change the settings of the SNMP Service:

1. Double-click [Administrative Tool] in [Control Panel].
2. Start [Services] in [Administrative Tool].
3. Select [SNMP Service] from the service list and then [Properties] in the [Action] menu.

   The "SNMP Properties" dialog box appears.
4. Enter "public" in the [Community name] box in the [Traps] property sheet and click the [Add to list] button.

   IMPORTANT:

   - To change the community name of traps to be received from the default "*" in the NEC ESMPRO Manager site, enter the same name as the community name newly set in the NEC ESMPRO Manager site.
   - To receive trap from NEC ESMPRO Agent at the NEC ESMPRO Manager machine, both community names should be the same.
5. Click the [Add...] button in [Trap destinations]. After entering the IP address of the NEC ESMPRO Manager machine of the send destination in the [Host name, IP or IPX address] box, click the [Add] button.

   IMPORTANT:

   If the IP address (or host name) of the remote NEC ESMPRO Manager specified as the trap send destination in the setup of the manager report (TCP/IP), the message warning the duplication appears. The specification of the same NEC ESMPRO Manager causes to be reported doubly.
6. Open the [Security] property sheet and make settings as follows;

   - Add the community name entered in Step 4 to [Accepted community names].
   - Set its authority to [READ CREATE] or [READ WRITE].
   - Select [Accept SNMP packets from any host.]

   IMPORTANT:

   - If you entered any community name other than "public" in Step 4, add that name to "Accepted community names."
   - Unless you set the acceptable community's authority to "READ CREATE" or "READ WRITE," you cannot perform monitoring from NEC ESMPRO Manager.

   Setup of receiving SNMP packets from specific hosts only

   Select [Accept SNMP packets from these hosts], specify IP addresses of the hosts, IP addresses of the servers to install Agent, and the loop-back address (127.0.0.1).

   Setup of receiving SNMP packets from specific communities only

   Change the name of the community receiving SNMP packets from the default "public" to any name.

IMPORTANT:

- If the community name is changed, the community of NEC ESMPRO Agent is changed and registered by starting from [Control Panel]. To change the community to another and register it, use the [SNMP Community] list box in the [General] tab.
- To allow NEC ESMPRO Agent to receive SNMP packets sent from NEC ESMPRO Manager, set the send community name in NEC ESMPRO Manager to be the same as that accepted by the SNMP Service in NEC ESMPRO Agent.

7. Terminate the network setup.

IMPORTANT:

- During OS installation, if the SNMP service is added to the system after applying the service package, apply it again. If not, the SNMP service may not operate properly, and this can cause the improper operation of NEC ESMPRO Agent.
- The SNMP Service is required for operating NEC ESMPRO Agent. If the SNMP Service is deleted after the installation of NEC ESMPRO Agent, install the SNMP Service and then reinstall NEC ESMPRO Agent.
- Some software products provided by other vendors use the SNMP Service. If the SNMP Service and NEC ESMPRO Agent are installed in the system in which such software as above is installed, it may be impossible to start NEC ESMPRO Agent services. If so, delete the SNMP Service once and install the service again. After which, reinstall NEC ESMPRO Agent and the other vendor's software.

Installation

NEC ESMPRO Agent is automatically installed together with the installation or re-installation of the NEC Express5800/ft series. NEC ESMPRO Agent may be installed manually on the master control menu of NEC EXPRESSBUILDER as follows:

1. Login to the system with user name “Administrator.”
2. Insert “NEC EXPRESSBUILDER” DVD into the DVD-ROM drive.

TIPS:

The DVD-ROM drive may be either the drive connected to the system or any optical disk drive located on the network and connected by the LAN Manager. (These are collectively called the optical disk drive hereafter).

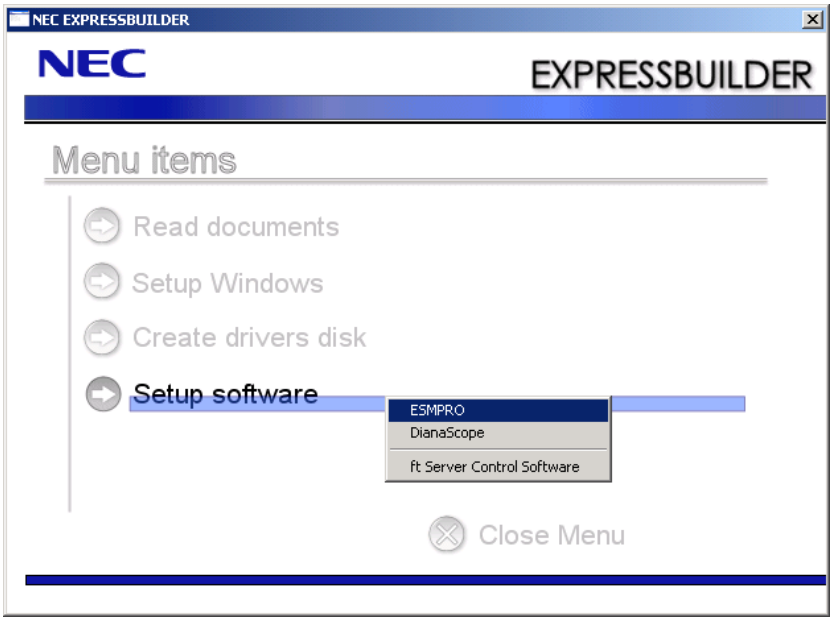
IMPORTANT:

To use a optical disk drive on the network, assign the network driver to the drive and then execute MC\1ST.EXE of the drive. Do not start the optical disk drive from the network computer in Windows Explorer.

The autorun function automatically displays the master control menu of NEC EXPRESSBUILDER.

3. Click [NEC ESMPRO] in [Setup].

The NEC ESMPRO setup is started to display the main menu.



4. Click [Agent] in the main menu of the NEC ESMPRO setup.

TIPS:

The available menus vary depending on OS types. (The menus that cannot be installed are displayed gray.)

IMPORTANT:

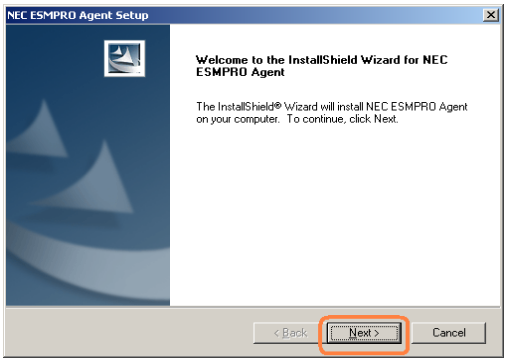
- Double-clicking to select a menu may display two same dialog boxes. Click the [End] button to close one of the dialog boxes.
- If you click the [Cancel] button during setup, the message asking whether to stop or not to stop the installation will appear. You can stop the installation by clicking on the [Stop] button (the main menu remains displayed). However, the file having been setup halfway will not be deleted.
- When NEC ESMPRO Agent is already installed, delete its older version from [Add or Remove Programs] in Control Panel, and install the new version.

5. The setup program determines the machine type automatically.

IMPORTANT:

If the setup program is unable to determine the machine model, the setup of NEC ESMPRO Agent will be stopped.

6. Click the [Next] button.


NEC ESMPRO Agent Setup
Welcome to the InstallShield Wizard for NEC ESMPRO Agent
The InstallShield® Wizard will install NEC ESMPRO Agent on your computer. To continue, click Next.
< Back
Next >
Cancel

7. Enter the path in which NEC ESMPRO Agent is installed and click the [Next] button.

The NEC ESMPRO Agent module is installed below the ESM directory of the root partition in default. If no problem is found, click the [Next] button without any modification.

To change the installation directory, click the [Reference] button, specify the desired installation directory with the full path including the drive name, and click the [Next] button.

8. When the installation end window appears, click the [OK] button.

The installed is complete. The functions of installed NEC ESMPRO Agent will be enabled after the system is restarted.

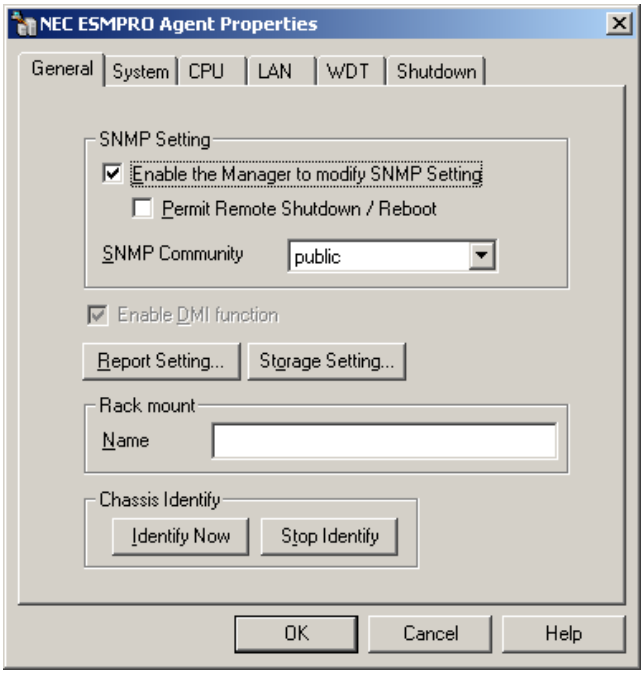
IMPORTANT:

- After the installation of NEC ESMPRO Agent, SNMP Service is stopped. The SNMP Services will be started when the OS is restarted.
- Even if the installation of NEC ESMPRO is completed, the main menu for the NEC ESMPRO setup remains displayed. Note that the main menu may be hidden by another dialog box. To terminate the NEC ESMPRO setup, click [End] in the main menu.

Setup of NEC ESMPRO Agent

The settings of installed NEC ESMPRO Agent remain unchanged from those at shipment. Click the [Start] button, [Setting], and [Control Panel] sequentially to open [Control Panel].

If you double-click the [NEC ESMPRO Agent] icon in [Control Panel], the property dialog box will appear. Modify the setting of each sheet in the dialog box to be fit to the used environment. The notes on setup and the necessary information are explained in “Supplement” in Chapter 5 of User’s Guide in the separate volume. See the supplement for setup or suspicion of malfunction.



Uninstall

The uninstallation of NEC ESMPRO Agent is described below.

Uninstallation of NEC ESMPRO Agent

The procedure of uninstalling NEC ESMPRO Agent is described below.

IMPORTANT:

Uninstallation of NEC ESMPRO Agent

- Start the uninstallation of NEC ESMPRO Agent after the system is started completely.
- If NEC ESMPRO Agent is uninstalled just after the system startup, the setup program may freeze displaying the [Service Being Deleted…] dialog box. Shutdown the system by using "Task Manager" or other operation. Then uninstall NEC ESMPRO Agent after the system is started completely.
- In the system that operates Windows Server 2003, do not change the setting of "Local security policy" from the default.
  The error occurs by InstallShield if the uninstallation is executed with the setting changed, and the uninstallation fails.

- With using NEC EXPRESSBUILDER:

  1. Make the main menu of the NEC ESMPRO setup appear by referring to the section "Install" in this document.

  2. Click [NEC ESMPRO Agent].

  The "Welcome" dialog box appears.

  3. Select [Delete] and then click the [Next] button.

  Now NEC ESMPRO Agent is uninstalled.

- Without using NEC EXPRESSBUILDER:

  1. Start [Add/Remove Programs] in [Control Panel].

  2. Select [NEC ESMPRO Agent] and click [Change/Remove].

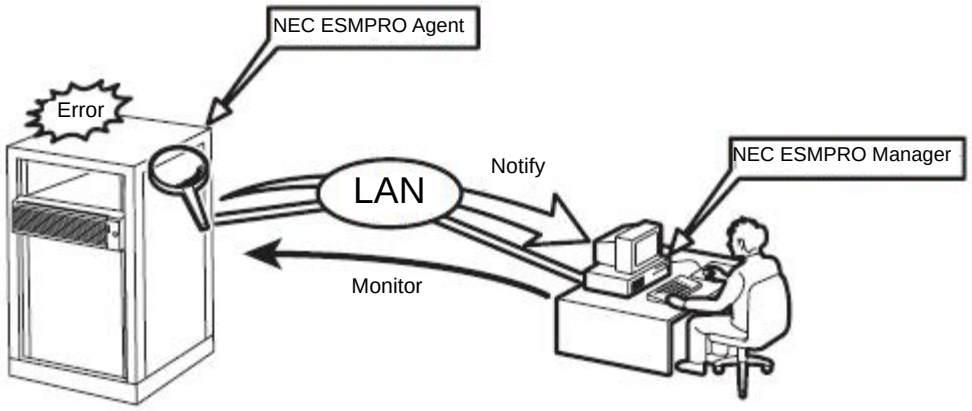
  The "Welcome" dialog box appears.

  3. Select [Remove] and click [Next].

  Now NEC ESMPRO Agent is uninstalled.

NEC ESMPRO Manager

Linked with NEC ESMPRO Agent installed in the server, NEC ESMPRO Manager monitors the server status and receives alerts from the server.



When a failing module in the server is to be replaced, NEC ESMPRO Manager enables logical module disconnection from the server and logical installation after module replacement.

For the installation of NEC ESMPRO Manager and notes on the operation, see the separate volume of the User's Guide.

CONFIRMING THE ft Server Control Software VERSION

The following describes how to check the version of ft Server Control Software, which consists of various types of software for fault tolerance. Perform the procedure when you need to check the ft Server Control Software version of the current system before adding units or attachment to NEC Express5800/ft series.

Confirm the version following the steps below:

1. Log in the system as an authorized Administrator.
2. Open Control Panel from the Start menu.
3. Open “Add or Remove Programs.”

   You can confirm the version that corresponds to the name of [ft Server Control Software].

APPLYING Windows Service Pack

Notes to apply the Windows Service Pack

You should not apply service packs other than those listed in “Step 1; Things Required for Setup” of Chapter 4 “WINDOWS SETUP” (page 4-4) in User’s Guide (Setup) on NEC Express5800/ft series by yourself.

When applying Service Pack, also apply appropriate Microsoft’s HotFix.

IMPORTANT:

- If you want to apply Service Packs other than ones listed in “Step 1; Things Required for Setup” of Chapter 4 “WINDOWS SETUP” (page 4-4) in User’s Guide (Setup), ask your sales agent about the application status of the Service Packs, and apply them to NEC Express5800/ft series.
- The Service Pack applied to NEC Express5800/ft series is the same as the standard Windows Server 2003 Service Pack.

Applying Windows Service Pack

Follow the procedure below to apply Service Packs to NEC Express5800/ft series.

Service Packs will not be installed automatically to NEC Express5800/ft series during “ft series Setup” or “Updating the system” to repair the system.

If Server Packs need to be applied, follow the procedure below.

If you want to apply Service Packs other than the ones listed in “Step 1: Things Required for Setup” of Chapter 4 “WINDOWS SETUP” (page 4-4) in User’s Guide (Setup), as your sales agent about the application status of the Service Packs and apply them by following the procedure below:

How to apply the Windows Service Pack

IMPORTANT:

When Windows Service Pack is applied, considerations on settings of Power and Screen Saver are required.

If the following settings are enabled when applying Windows Service Pack, the process may stop or Windows Service Pack may not be applied properly. Disable the settings by clearing the checkboxes before applying Windows Service Pack. Reconfigure the following settings as necessary afterwards.

- Settings of Screen Saver

- Power Schemes (Turn off monitor, Turn off hard disks)
- Hibernation (enable Hibernation)

Logon to the system as a user with administrator authority and apply Service Packs.

1. Download Service Packs from the Web site of Microsoft and apply them.
2. Restart the system.

COMPRESSING A SYSTEM DRIVE

Do not compress the root directory and the Windows directory when compressing the System Drive. (The Windows Server 2003 directory is labeled as "Windows.") If you compress the root directory and the Windows directory, operational stability cannot be ensured because the Windows File Protection (WFP) may replace an unassigned driver with a signed driver.

ABOUT Windows Update (APLYING SECURITY PATCHES)

Before updating Windows modules by using the Windows Update function on NEC Express5800/ft series, make sure to read the description of each module. Contact NEC sales agent for information about the test status of security patch and QFE on NEC Express5800/ft series. It is strongly recommended to contact NEC sales agent when updating the operating system on NEC Express5800/ft series.

→ Under a support policy for security patches and QFE on NEC Express5800/ft series, security patches released by Microsoft are categorized into the following levels according to their importance:

- **IMPORTANT Patches (Considered as IMPORTANT by NEC and requires immediate application):** Tests will be performed upon publication of new patches and the results will be informed to NEC sales agents. The high-risk viruses (such as Nimba worm as a past example) will be immediately tested.
- **Security Rollup Package (SRP):** Tests will be performed along with the publications of SRP and the results will be informed to NEC sales agents.
- **Other patches:** Tests for the security patches regarding the standard functions of Windows Operating System will be periodically performed, and the results will be informed to NEC sales agents.

Contact NEC sales company if you have any questions or concerns regarding Windows Update.

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Chapter 6

Troubleshooting

This chapter describes what to do when files needed to operate the OS are damaged and any trouble occurs on the product.

SYSTEM REPAIR

If the system cannot be operated by some reason, use Recovery Console to restore the system. However, this method is only recommended to users or administrators who have good knowledge of the system.

When you have restored a damaged file by using Recovery Console, always update the system as described later in this chapter.

IMPORTANT:

If hard disks cannot be recognized, the system cannot be repaired.

Cautions for using the Windows Server 2003 Recovery Console

For using the Recovery Console in a system where the system disk is a dynamic disk, the following settings need to be configured beforehand.

If these settings are not done, files on the hard disk cannot be updated on the Recovery Console, and the message “Access is denied” appears.

1. “Local Security Policy” setting

IMPORTANT:

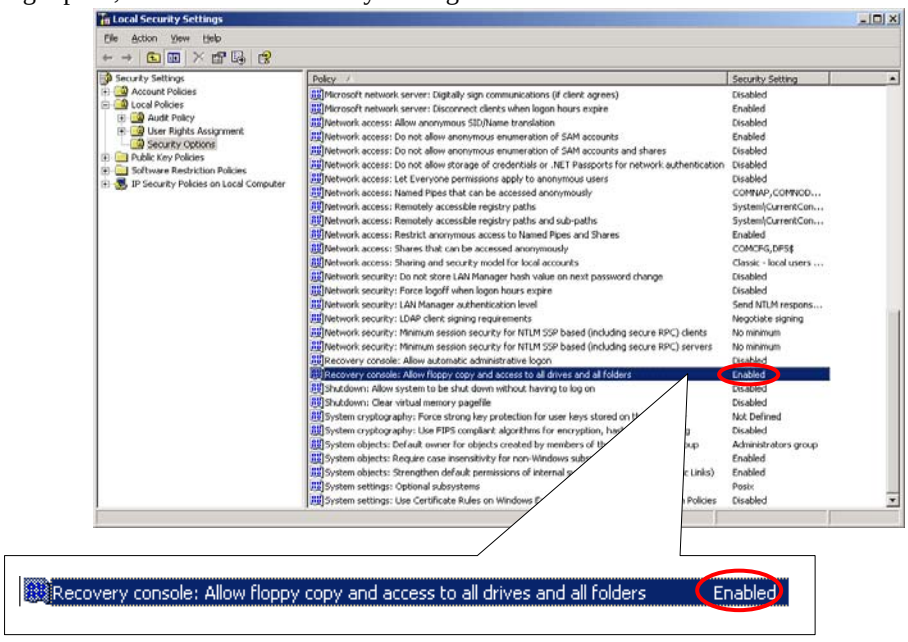
This setting should be made on the Windows Server 2003 in advance.

(a) Start Windows Server 2003, and log on as a user with the administrator authority.

(b) From the Start menu, select [Administrative Tools] and select [Local Security Policy].

(c) Select [Local Policies] and then select [Security Options] in the left pane of the [Local Security Settings] window.

(d) Double-click [Recovery console: Allow floppy copy and access to all drives and all folders] in the right pane, and enable the Security Setting.



2. Environment variable "AllowRemovableMedia" setting

IMPORTANT:

This setting is made on the Windows Server 2003 Recovery Console when the Windows Server 2003 Recovery Console is in use. This should be set every time when the Recovery Console is started.

(a) Start the Windows Server 2003 Recovery Console.
For how to start the Recovery Console, see "Preparation" (page 6-4) and "Starting up Recovery Console" (page 6-5).

(b) Log on to the Recovery Console, and execute the following command.
(The default is FALSE)
set AllowRemovableMedia = TRUE

IMPORTANT:

- The dynamic disk can be written from the Windows Server 2003 Recovery Console after the setting shown above is made.
- As the default, the Windows Server 2003 Recovery Console is not allowed to write data from the basic dynamic disk to a floppy disk. However, after the setting shown above is made, a floppy disk can be written (copy, access).

Default setting:

Write (copy, access)		Basic disk	Dynamic disk
Copy From	Copy To access destination		
HDD	HDD	Copy available	Copy not available
FD	HDD	Copy available	Copy not available
CD	HDD	Copy available	Copy not available
CD	FD	Copy not available	Copy not available
HDD	FD	Copy not available	Copy not available

After the setting:

Write (copy, access)		Basic disk	Dynamic disk
Copy From	Copy To access destination		
HDD	HDD	Copy available	Copy available
FD	HDD	Copy available	Copy available
CD	HDD	Copy available	Copy available
CD	FD	Copy available	Copy available
HDD	FD	Copy available	Copy available

Note: HDD : Hard disk (SystemDrive, SystemRoot only)
FD : Floppy disk
CD : CD-ROM

Preparation

You need a support disk, “Windows Server 2003 OEM-DISK for NEC EXPRESSBUILDER” to start up the Recovery Console. Have “Windows Server 2003 OEM-DISK for NEC EXPRESSBUILDER” ready before starting the Recovery Console.

If you do not have a computer that runs Windows Server 2003 or Windows XP/Vista.

Follow the steps below to create a “Windows Server 2003 OEM-DISK for NEC EXPRESSBUILDER”:

1. Prepare a 3.5-inch floppy disk.
2. Power on the peripherals and then NEC Express5800/ft series.
3. Disable the configuration for OS Boot Monitoring function.

   In the BIOS setup, select [Server] - [Monitoring Configuration] - [OS Boot Monitoring] and choose “Disabled.” See “Step 3: Disable OS Boot Monitoring Function” (page 4-9) for details.
4. Insert the NEC EXPRESSBUILDER DVD into the drive of the server.
5. Then, reset (pressing **Ctrl** + **Alt** + **Delete**) or power off/on NEC Express5800/ft series to reboot it.

   The system will start up from the NEC EXPRESSBUILDER DVD.
6. Select [OS installation *** default ***] when [Boot Selection] menu is displayed. (Even if you enter nothing, it automatically proceeds to the next screen.)
7. Select [Create the OEM-DISK for Windows] from [Top Menu] Step.
8. Select [Create a “Windows Server 2003 OEM-DISK for EXPRESSBUILDER”] or [Create a “Windows Server 2003 x64 Edition OEM-Disk for EXPRESSBUILDER”] and click [Perform] depending on the OS of your choice.
9. Set the floppy disk according to the direction displayed on the screen. An OS-specific [OEM-DISK] will be created. Write protect the floppy disk created, put on a label and store in a safe place.

IMPORTANT:

Enable the configuration for OS Boot Monitoring function to deploy the system without performing the system repair which uses the Recovery Console. In the BIOS setup, select [Server] - [Monitoring Configuration] - [OS Boot Monitoring] and set appropriate time. See “Step 13: Enable OS Boot Monitoring Function” (page 4-40) for details.

If you have a computer that runs Windows Server 2003 or Windows 2000/XP/ Vista.

You can also create a “Windows Server 2003 OEM-DISK for NEC EXPRESSBUILDER” by the steps below:

1. Prepare a 3.5-inch floppy disk.
2. Insert the NEC EXPRESSBUILDER DVD into the drive of a computer that runs Windows Server 2003 or Windows XP/Vista.
3. The menu screen starts up. Click [Create drivers disk] and select [OEM-Disk for Windows Server2003] or [OEM-Disk for Windows Server 2003 x64 Edition] depending on the OS of your choice.
4. Follow the instructions on the screen to insert the floppy disk.

   An OS-specific [OEM Disk] will be created. Write protect the floppy disk, put on a label and keep it in a safe place.

Starting up Recovery Console

You can start up Recovery Console in two ways:

- Start up Recovery Console installed on the system.
- Start up Recovery Console from the Windows Server 2003 CD-ROM.

■ Installing Recovery Console on the system

1. Start up the NEC Express5800/ft series and log on to Windows Server 2003.
2. Insert the Windows Server 2003 CD-ROM into the drive.
3. From [Start] of the taskbar, select [Run...] to run.

   For Windows Server 2003 R2, Enterprise Edition:
   Optical disk drive:\i386\winnt32.exe /cmdcons /syspart:c: /tempdrive:c:

   For Windows Server 2003 R2, Enterprise x64 Edition:
   Optical disk drive:\amd64\winnt32.exe /cmdcons /syspart:c: /tempdrive:c:

4. Follow the messages that appear on the screen to continue.

■ Starting up the Recovery Console

1. Disable the configuration for OS Boot Monitoring function.

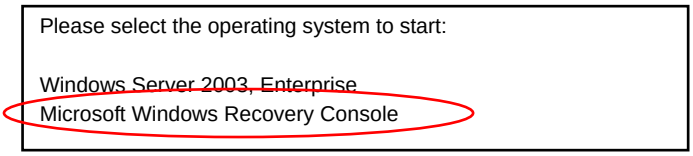
   Select [Server] - [Monitoring Configuration] - [OS Boot Monitoring] and choose “Disabled.” See “Step 3: Disable OS Boot Monitoring Function” (page 4-9) for details.

2. If you have duplexed the HDDs with the RDR (Rapid Disk Resync) feature, unmount and remove CPU/IO module 1 before starting up the Recovery Console. If the disk error of the slot 1 of the CPU/IO module 1 is apparent, unmount and remove the CPU/IO module 0. Note that if you execute the Recovery Console with two CPU/IO module mounted and implemented, there may occur the OS stop error on the startup after the Recovery Console is used.

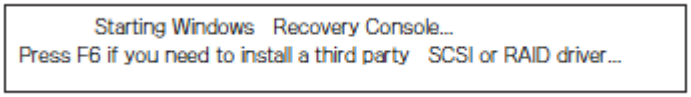
Mount the removed CPU/IO module after using the Recovery Console and normal OS startup.

<When starting up Recovery Console installed on the system>

(a) Select Microsoft Windows Recovery Console in "Please select the operating system to start:"



(b) When the following message appears on the screen press **F6** quickly.



<When starting Recovery Console from Windows Server 2003 CD-ROM>

(a) Insert the Windows Server 2003 CD-ROM into the drive.

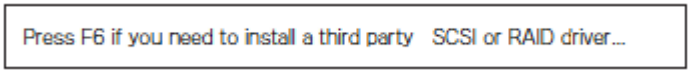
(b) When the CD-ROM is set, reset the system (press **Ctrl** + **Alt** + **Delete**) or press the power switch to power off and on to reboot the NEC Express5800/ft series.

(c) When the following message appears, press any key to start up from the CD-ROM.

IMPORTANT:

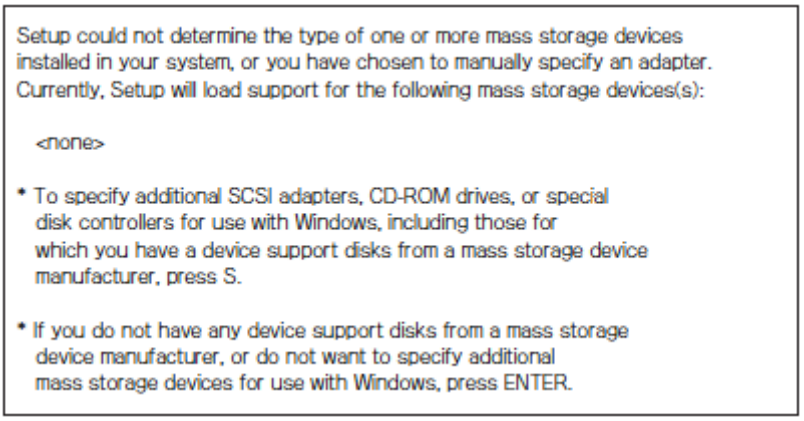
Press any key while the message is displayed. Otherwise the system will be started up from a hard disk and Recovery Console will not be started.

(d) When the following message appears on the screen, press **F6** quickly.



3. When the screen to select SCSI drivers appears, follow the steps below.

(a) When the following screen is displayed, press the **S** key.

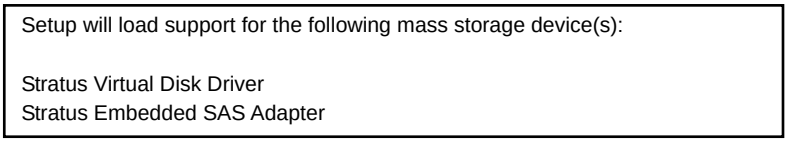

Setup could not determine the type of one or more mass storage devices
installed in your system, or you have chosen to manually specify an adapter.
Currently, Setup will load support for the following mass storage devices(s):
<none>
* To specify additional SCSI adapters, CD-ROM drives, or special
disk controllers for use with Windows, including those for
which you have a device support disks from a mass storage device
manufacturer, press S.
* If you do not have any device support disks from a mass storage
device manufacturer, or do not want to specify additional
mass storage devices for use with Windows, press ENTER.

(b) Set the OS-specific “OEM-DISK” and press **Enter**.

(c) Select [Stratus Virtual Disk Driver] and then press **Enter**.
The screen of (a) is displayed again.

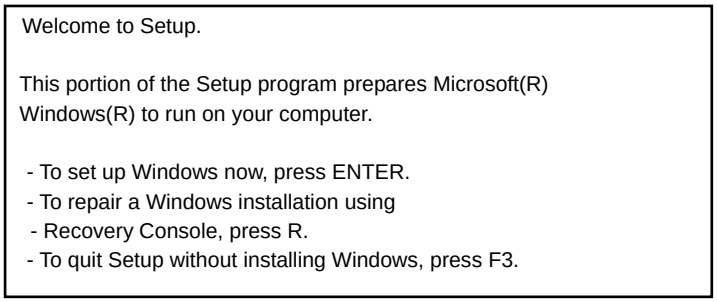
(d) Select [Stratus Embedded SAS Adapter] and then press **Enter**.
Go back to the screen of the procedure (a), press **S** key and proceed to the procedure (d).

(e) When the following screen appears, remove the floppy disk from the floppy disk drive and press **Enter**.


Setup will load support for the following mass storage device(s):
Stratus Virtual Disk Driver
Stratus Embedded SAS Adapter

Continue the operations by following the messages.

4. When you start up Recovery Console from Windows Server 2003 CD-ROM, the following message appears. Press the **R** key to boot Recovery Console.


Welcome to Setup.
This portion of the Setup program prepares Microsoft(R)
Windows(R) to run on your computer.
- To set up Windows now, press ENTER.
- To repair a Windows installation using
- Recovery Console, press R.
- To quit Setup without installing Windows, press F3.

IMPORTANT:

- The message shown above does not appear when you have started up the Recovery Console installed on the system.

5. Follow the messages on the screen to start up the Recovery Console.

IMPORTANT:

- When you restored a damaged file using the Recovery Console, update the system described in the next section.
- If you run the system without restoring files, enable the configuration for OS Boot Monitoring function. When necessary for system operation, select [Server] - [Monitoring Configuration] - [OS Boot Monitoring] and set appropriate time. See “Step 13: Enable OS Boot Monitoring Function” (page 4-40) for details.
- To write data to a dynamic disk, settings described in “Cautions for using the Windows Server 2003 Recovery Console” in “System Repair” need to be configured in advance. For details, see “Cautions for using the Windows Server 2003 Recovery Console” in “System Repair.”

Updating the System

IMPORTANT:

NEC Express5800/ft series is a precision instrument. You should ask maintenance personnel to update the system.

You will need to update the system after you repair the system using Recovery Console.

IMPORTANT:

- Make sure to follow the steps below when you have restored the system by using Recovery Console.
- Check the configuration for OS Boot Monitoring function.
  If [OS Boot Monitoring] selected in [Monitoring Configuration] of [Server] is not set to "Disabled", disable it. See "Step 3: Disable OS Boot Monitoring Function" (page 4-9) for details.
- When updating the system, considerations on settings of Power and Screen Saver are required. If the following settings are enabled when updating the system, the process may stop or the system update may not be applied properly. Disable the settings by clearing the checkboxes before updating the system. Reconfigure the following settings as necessary afterwards.
  - Settings of Screen Saver
  - Power Schemes (Turn off monitor, Turn off hard disks)
  - Hibernation (enable Hibernation)

1. Log on to the system with OS installed as user with Administrative account.

IMPORTANT:

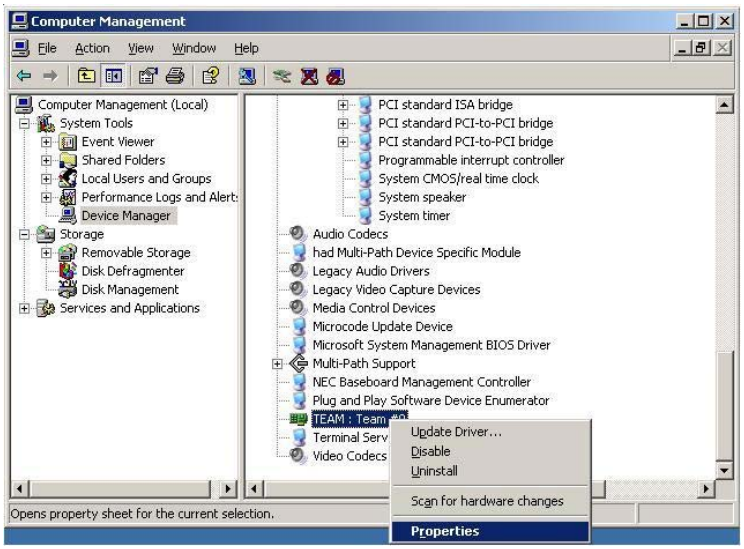
Check that the dual system is configured properly (Confirm that the STATUS LED 2 on the CPU/IO module illuminates green. See page 4-7 for location of the STATUS LED).

2. Remove duplications of all the LANs for both onboard and option boards.

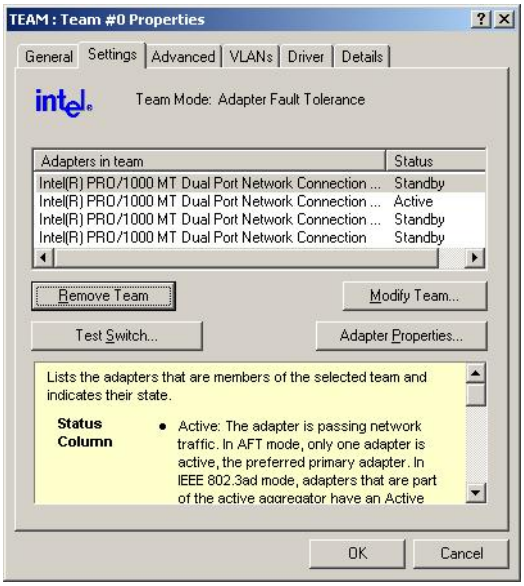
When dual LAN is disabled, a setup of LAN will be deleted. Note down the setup information.

(a) Start Device Manager.

(b) Select the team adapter that you want to cancel duplication, and select [Properties] from the menu displayed by right-click, to display the Properties window.



(c) Select the [Settings] tab in the Properties window, and click [Remove Team].


TEAM : Team #0 Properties
General
Settings
Advanced
VLANs
Driver
Details
intel
Team Mode: Adapter Fault Tolerance
Adapters in team
Status
Intel(R) PRO/1000 MT Dual Port Network Connection ... Standby
Intel(R) PRO/1000 MT Dual Port Network Connection ... Active
Intel(R) PRO/1000 MT Dual Port Network Connection ... Standby
Intel(R) PRO/1000 MT Dual Port Network Connection Standby
Remove Team
Modify Team...
Test Switch...
Adapter Properties...
Lists the adapters that are members of the selected team and indicates their state.
Status Column
Active: The adapter is passing network traffic. In AFT mode, only one adapter is active, the preferred primary adapter. In IEEE 802.3ad mode, adapters that are part of the active aggregator have an Active
OK
Cancel

(d) The confirmation dialog will be displayed. Click [Yes].

3. Follow the steps below to update the system.

Do not input or output data during the update process.

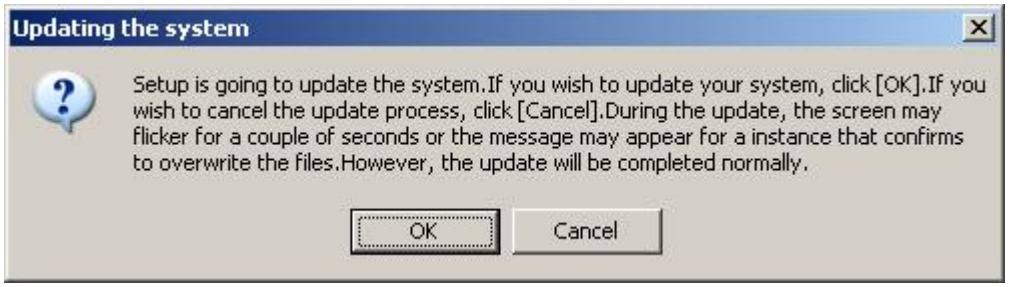
a) After logging on to the system as a user with the Administrative account, insert NEC EXPRESSBUILDER DVD into the drive of the server.

b) When the Autorun Menu screen appears, click [Setup Windows] and click [Update the system] on the menu.

4. When the dialog box for confirmation of executing system update appears, click [OK].

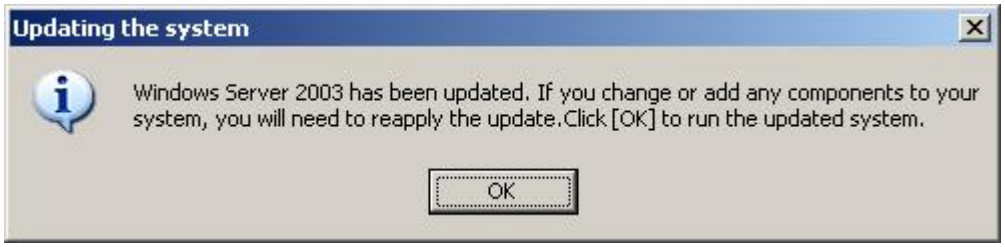
The system update will start.

Follow the instructions.


Updating the system
Setup is going to update the system.If you wish to update your system, click [OK].If you wish to cancel the update process, click [Cancel].During the update, the screen may flicker for a couple of seconds or the message may appear for a instance that confirms to overwrite the files.However, the update will be completed normally.
OK
Cancel

4. After the system update is completed, the dialog box below will be displayed. Click [OK].

The system will be rebooted. Eject a DVD from CD/DVD-ROM drive after the reboot process starts.


Updating the system
Windows Server 2003 has been updated. If you change or add any components to your system, you will need to reapply the update.Click [OK] to run the updated system.
OK

IMPORTANT:

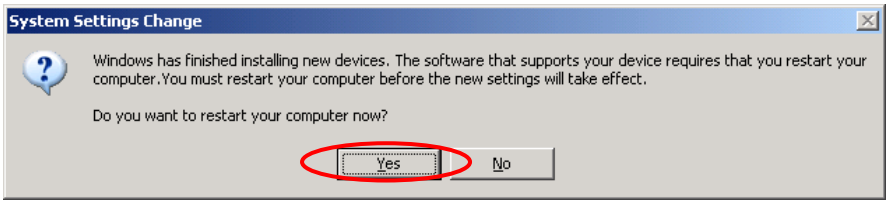
If the message, **"**Windows - FT Orphaning A disk that is part of a fault-tolerant volume can no longer be accessed**"** is displayed during the update process, an OS stop error may occur when restarting the OS. If an OS stop error occurs, Hold down the POWER switch, and turn off the system. In this case, the system will be successfully updated, however, disk mirroring is disabled. Make sure to check disk mirroring in 8.
When "Found New Hardware" wizard appears at the reboot, click [Cancel]. If the same message appears again, click [Cancel] again.

5. Check disk mirroring.

If the disk mirroring is disabled, enable the mirroring again. For the method to check disk mirroring, see "Step 8: Set Dual Disk Configuration" in Chapter 4.

IMPORTANT:

- During disk re-synchronization, do not shut down the system until the resynchronization is completed.
- If the following dialog appears, confirm that the disk is mirrored and click [Yes] to restart the system.


System Settings Change
Windows has finished installing new devices. The software that supports your device requires that you restart your computer.You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

6. Reboot the system.

7. After the system has rebooted, log on as a user with Administrative account.

IMPORTANT:

Check that the dual system is configured properly (confirm that the STATUS LED 2 on the CPU/IO module illuminates green. See page 4-7 for location of the STATUS LED).

8. Duplicate the LAN again for both onboard and option boards.

Refer to "Step 7: Set Dual LAN Configuration" on page 4-23 or "DUAL LAN CONFIGURATION" in Chapter 3 of the separate volume of User's Guide. Reconfigure the LAN based on the memo you have taken.

9. When it is necessary for the system operation, enable [OS Boot Monitoring] selected in [Monitoring Configuration] of [Server]. See "Step 13: Enable OS Boot Monitoring Function" on page 4-40 for details.

Installing ft Server Control Software

When you install Windows Server 2003 R2, Enterprise x64 Edition with “Manual Setup,” or reinstall it in order to repair ft Server Control Software, take the following procedure to install the ft Server Control Software.

When you install Windows Server 2003 R2, Enterprise Edition with “Express Setup,” ft Server Control Software is automatically installed; therefore, you do not need to install ft Server Control software with the following procedure.

IMPORTANT:

- Terminate all programs before starting the installation.
  You must terminate all programs because the software will not be installed successfully, especially when Microsoft management console is running.
- The LAN settings will be deleted by the installation. Write down the setting information for making the settings after the installation as necessary.
- The dual configuration of LAN needs to be removed before starting the installation.
  If it is still set, remove the setting.
- When you execute the manual setup of ft Server Control Software or reinstall for a restoration, you need to follow the procedure in [Chapter 4 Windows Setup] and disable the OS Boot Monitoring function. After the reinstallation is finished, resume the setting of the OS Boot Monitoring function to “Enabled.”

1. Follow the steps below to install ft Server Control Software.

a) After logging on to the system as a user with the Administrative account, insert the “NEC EXPRESSBUILDER” DVD-ROM into the DVD-ROM drive of the server.

b) The menu screen starts up. Click [Setup software] and select [ft Server Control Software] on the menu.

Follow the instructions to with the installation. The message “ft Server Control Software, Now Installing... Please Wait.” is displayed while ft Server Control Software. Do not use the keyboard or mouse while this message is being displayed.

2. The system is rebooted during the installation.

The system is rebooted several times during the installation. Remove the DVD from the DVD-ROM drive once rebooting is started.

After the system is rebooted, log in again as the user logged in before rebooting. Installation of the ft Server Control Software is continued.

3. The message “Installation finished.” is displayed.

Once the installation is completed, the message “Installation finished.” is displayed and the

rebooting starts by clicking [OK]. Change this screen to check the message, as the message can hide behind the screen.

For using “ft Server Control Software UPDATE CD-ROM” to update ft Server Control Software:
After installing the ft Server Control Software, follow the procedure on the setup card attached to the “ft Server Control Software UPDATE CD-ROM” and apply the update.

TROUBLESHOOTING

This section describes what you should do when a trouble occurs in the product.

Problems with NEC EXPRESSBUILDER

When the NEC Express5800/ft series is not booted from the NEC EXPRESSBUILDER DVD-ROM, check the following:

- ☐ Did you set the NEC EXPRESSBUILDER DVD during POST and restart the server?

  → If you do not set the NEC EXPRESSBUILDER DVD during POST and restart the server, an error message will appear or the OS will boot.

- ☐ 1 Is BIOS configuration correct?

  → The boot device order may be specified with the BIOS setup utility of the server. Use the BIOS setup utility to change the boot device order to boot the system from the optical disk drive first.
  <Menu to check: [Boot]>

- ☐ If [OS installation***default***] is selected at BOOT Selection screen, following message is displayed.

  After this message appears, check the error and take the appropriate corrective action according to the message listed in the table below.
  .

Message	Cause
This EXPRESSBUILDER version was not designed for this computer. Insert the correct version and click [OK]. (When you click [OK], the computer reboots.)	This NEC EXPRESSBUILDER version is not designed for this server. Execute the NEC EXPRESSBUILDER on the compliant server.
EXPRESSBUILDER could not get the hardware parameters written in this motherboard. This version is not designed for this computer or the motherboard may be broken. (When you click [OK], the computer reboots	This message is displayed when NEC EXPRESSBUILDER cannot find system-specific information due to the replacement of a motherboard, and so on.
The hardware parameters written in this motherboard are incorrect. This version is not designed for this computer or the motherboard may be broken.	

An error message will also be displayed when an error was detected during system diagnosis. Take a note or print the error message displayed, and contact your sales agent.

Problems with Windows Setup

Failed to install Windows Server 2003 correctly.

- ☐ Have you checked instructions and information on installation?

  → See “Step 1: Things Required for Setup” (page 4-4) and “Step 2: Prepare for Express Setup” (page 4-7).

Rebooted during the setup.

→ See “Step 3: Disable OS Boot Monitoring Function” (page 4-9), and set the parameter of this machine’s OS Boot Monitoring function to correct value.

ft Server Control Software UPDATE CD-ROM is not included.

→ ft Server Control Software UPDATE CD-ROM is used to update ft Server Control Software; it may not be shipped with the equipment. (Not included if “NEC EXPRESSBUILDER” DVD contains the latest version of software programs at the time of shipment). For the latest release of ft Server Control Software and purchase of the latest version of its ft Server Control Software UPDATE CD-ROM, contact your sales agent.

During a setup, “Previous Operating System C:” was selected on a selection screen of the operating system.

→ The process will be stopped along the display of DOS prompt or black screen. In this case, press **Ctrl** + **Alt** + **Delete**, or turn off the power to reboot the system. Installation will be continued after a reboot.

Windows can be operated after a setup but each module or PCI board is not duplicated. (Status LED 2 on the CPU/IO module does not light on green).

- ☐ Did you abort the installation during a setup such as by closing a window of the programs that are running?

  → Installation will be aborted if you finish the programs that are running such as by closing a window. Although the operation on Windows will be feasible, PCI boards will not be duplicated properly if you abort the installation. In this case, "Step 1: Things Required for Setup" needs to be done from the beginning.

DISK Access LED will be lit in amber.

- ☐ Did you properly setup the duplex of HDDs?

  → DISK Access LED will be lit in amber, if a setup for duplex is not performed. (See "LEDs" in the separate volume of the User's Guide for details about the indication status of LED.) See "Step 8: Set Dual Disk Configuration" in Chapter 4 and set up the duplex of HDDs.

"Complete memory dump" cannot be specified to the write debug information on "Set Memory Dump" (Debug Information).

→ "Complete memory dump" cannot be specified (not displayed) if the memory size exceeds 2GB. Specify "Kernel memory dump" in this case.

Cannot find the recommended value for a paging file.

→ See "Size of the Partition to be Created" in "Step 1: Things Required for Setup."

Cannot specify a network path for the storage location of diagnosis information (collect log) in "Set Dr. Watson."

→ You cannot specify a network path. Specify a path to a local computer.

The Telnet Service is not installed.

→ Adjust the computer name to 14 characters or less, and then install the Telnet Service according to <How to install the Telnet Service>.

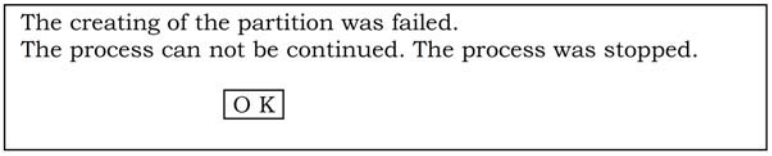
<How to install the Telnet Service>

1. Select [Run] from the Start menu.
2. Type "tlntsvr /service" in the [Open] box, and click [OK].
3. From the Start menu, point to [Control Panel] and click [Administrative Tools] and then click [Services] to specify whether the Telnet Service is registered.

Note: Once the installation of Telnet Service is finished, you may change the computer name to 15 or more characters.

Problems with Express Setup

Following message appeared when you tried to install Express Setup to the hard disk drive that has smaller capacity than the specified partition size:



→ Cannot continue the setup.
Specify a smaller partition size than the capacity of connected hard disk drive, and then retry the setup.

The system partition is created with a smaller size than the specified value.

→ In Express Setup, there could be that the system partition is created with a size which is about 8MB smaller than the specified size. This has no negative effect on operating the system.

Data on the peripheral HDD was erased during the Express Setup.

☐ Is there any HDD other than the HDD to install OS attached?

→ Detach external HDD(s) and run the Express Setup again.

.

Cannot configure the details of network adapter.

→ You cannot configure the details of network adapter during setup of NEC Express5800/ft servers.

You can configure this **after** the startup of Windows.

Problems with NEC ESMPRO Setup

A menu which cannot be chosen with a setup main menu.

→ The available menus vary depending on the OS types. (The menus that cannot be installed are displayed in gray.)

Stop the setup of NEC ESMPRO Agent on the way.

→ If you click [Cancel] during the setup, the message asking whether to stop or not to stop the installation will appear. You can stop the installation by clicking [Stop] (the main menu remains displayed). However, the file having been setup halfway will not be deleted.

Start the uninstallation of NEC ESMPRO Agent after the system is started completely.

→ If NEC ESMPRO Agent is uninstalled just after the system startup, the setup program may freeze displaying the [Service Being Deleted…] dialog box. Shutdown the system by using Task Manager or other operation. Then uninstall NEC ESMPRO Agent after the system is started completely.

* For installation procedure and detailed explanations on NEC ESMPRO Manager, refer to the online document in the NEC EXPRESSBUILDER DVD.

Problems with System Repair

"Press F6 if you need to install a third party SCSI or RAID driver…" was not displayed and there was no chance to enter F5 and F6 when "When starting Recovery Console from Windows Server 2003 CD-ROM" was performed.

- ☐ Did you press any key when the message "Press any key to boot from CD" is displayed on top of the screen?

  → Start-up from Windows Server 2003 CD-ROM is required to start the Recovery Console from Windows Server 2003 CD-ROM. Press any key while the message "Press any key to boot from CD" is displayed on the screen. You cannot start the Recovery Console from the CD-ROM unless the any key is pressed while the message is being displayed. Restart the system when it does not start from CD-ROM and the message "Press F6 if you need to install a third party SCSI or RAID driver…" is not displayed. See "Starting up Recovery Console" in "SYSTEM REPAIR" in this chapter to start again.

The screen turns out to be black for a while when booting the Recovery Console.

→ If you start the Recovery Console that is installed in the system, the screen turns out to be black for a while when booting the Recovery Console. Since the system is normally working, please wait for a while.

Appendix A

About Services

Information on NEC Express5800/ft series is provided the web at NEC Express5800 Web ASIA PACIFIC

http://www.nec.co.jp/express/

N8800-122F/132F, EXP320J

NEC Express5800/320Fd-LR

N8800-123F/133F, EXP320K

NEC Express5800/320Fd-MR

User's Guide (Setup)

4th Edition

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